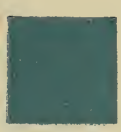
# Children's Medical Center

1952-53



THE CHILDREN'S HOSPITAL
INFANTS' HOSPITAL
CHARITABLE SURGICAL APPLIANCE SHOP
THE HOSPITAL AND CONVALESCENT HOME FOR CHILDREN
ASSOCIATION OF THE HOUSE OF THE GOOD SAMARITAN

THE SHARON SANATORIUM
THE CHILDREN'S MISSION TO CHILDREN
CHILDREN'S CANCER RESEARCH FOUNDATION, INC.
JUDGE BAKER GUIDANCE CENTER

*Boston*

1849 Children's Mission to Children founded.

1861 Association of the House of the Good Samaritan established.

1863 First orthopedic ward in the country opened at The House of the Good Samaritan.

1869 The Children's Hospital opened at 9 Rutland Street (charges to Boston residents $4.00 per week).

1870 The Children's Hospital moved to larger quarters at 1429 Washington Street.

1874 The Wellesley Convalescent Home established in Weston by the Ladies Aid Association of the Children's Hospital.

1875 Out-patients Department of Children's Hospital opened at 1525 Washington Street.

1881 Infants' Hospital established at Huntington Avenue and Gainsborough Street as a development of the West End Nursery.

1882 Children's Hospital moved to new building (cost $125,000) at corner of Gainsborough Street and Huntington Avenue.

1883 The price of progress evidenced in the daily cost of patient care which rose to $1.22 as compared with $1.14 in the old building.

1886 Charitable Surgical Appliance Shop opened on Huntington Avenue.

1889 Nurses Training School started.

1889 Patients admitted to Children's Hospital from places as far afield as Colorado, Dakota and California as well as foreign countries including Scotland.

1891 The Sharon Sanatorium established.

1892 Wellesley Convalescent Home for Children moved to present site in Wellesley.

1905 The House of the Good Samaritan moved to present site at 25 Binney Street.

1910 Clinic for infant feeding established at Children's Hospital.

1914 Children's Hospital moved to present site at 300 Longwood Avenue.

1914 Infants' Hospital moved to what is now the School of Public Health.

# THE

# CHILDREN'S MEDICAL

# CENTER

# THE CHILDREN'S

# ANNUAL REPORT *for*

# MEDICAL CENTER

*the Fiscal Year 1952-3*

BOSTON · MASSACHUSETTS

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# Foreword

## The Children's Medical Center

In 1945 the Children's Medical Center was only an idea. Now it is an actuality.

It seems appropriate therefore that The Children's Medical Center, Inc. should publish its own separate report, outlining its concept and development, and embodying brief summaries of the functions and activities of the institutions affiliated in the Center.

It should be understood, however, that this report of the Center is intended to supplement, and not to supersede the reports of the affiliated institutions.

The principal purpose of this report of The Children's Medical Center, Inc. is to review its purposes and to summarize the work in which it and the institutions which compose it are cooperating.

# Report of the President

At the close of the last war the officers and trustees of the Children's Hospital re-examined and appraised the situation of the Hospital. Its resources were insufficient for any material growth. It was, however, faced with no immediate crisis, and its medical staff was excellent. But its needs were many. Some of its buildings were antiquated and facilities for patients and staff were inadequate. It was clear that active steps should be taken to improve the situation.

Two alternative plans were considered. The more obvious and more conservative one was to confine efforts to the improvement of the Hospital along lines already well established. The other was first to determine in what way or ways the work of the Hospital could be expanded, so that it might serve to bring about the greatest practicable contribution to the health and well-being of children, and then to make every effort to put such a plan to do this into effect.

The more obvious and conservative plan would have been the easier to carry out. We chose the other and more difficult one.

A statement of the then President of the Hospital announced this decision. In an excerpt from that statement first printed in April 1946, the general plan which has been followed was outlined as follows:

> "The Children's Hospital presents this preliminary statement regarding its plans for a Medical Center for Children – the first such center in this country and in the world.
>
> "It is, admittedly, an ambitious plan. We have undertaken to proceed with it, however, because we believe it is the most important and productive step that can be taken to advance medical science in the care and treatment of children. This has been confirmed by all authorities with whom we have consulted.
>
> "A hospital by itself is primarily a repair shop. It must have the best facilities possible to treat and cure any illness or injury.
>
> But medical science should go further and seek to do more to prevent the need of repairs.
>
> "A MEDICAL CENTER, with a hospital as a nucleus, can and will spread out its services and accomplish this result far better than a hospital alone. It can make such of its services as may be desired available to a wider circle of doctors and to hospitals with which it will be affiliated. It can show how, by appropriate steps, taken in time, the number of children needing

hospital care can be greatly reduced. It can raise the general standards of health of children. It can obtain and make generally available more knowledge about how to keep well children well, in body and mind, and able to adapt themselves to the complications of growing up in varying environments."

Active campaigns for funds were instituted to obtain additional resources to provide the necessary physical facilities required for the Hospital and other units of a Children's Medical Center and to support additional research work. Negotiations were started to affiliate with the Children's Hospital, as units of a Children's Medical Center, other institutions whose work was primarily concerned with the health and welfare of children, and by such affiliations to avoid duplication of effort to expand the services available for the care of children, and to make available additional resources.

It seemed clear that other institutions engaged in similar or analagous work to that of the Children's Hospital should, as far as was legally possible and practicable, co-operate with it and with each other in the planning and conduct of their work. For this purpose it was felt advisable that there should be a common unit in which all the institutions to be affiliated could join, and in which they should all be represented.

For this general purpose The Children's Medical Center, Inc. (a Massachusetts charitable corporation) was formed with a broad charter authorizing it to carry on any and all of the activities for the betterment of the health of children that could be reasonably foreseen as practicable. As arrangements for affiliation with other institutions with the Children's Hospital in the Children's Medical Center, Inc. were worked out, each of such institutions agreed to co-operate with the Children's Hospital and with the other units of the Children's Medical Center, representatives of each became directors of the Children's Medical Center and of the Executive Committee of the Children's Hospital. Also, the Children's Hospital was given representation upon the respective boards of the affiliated institutions. In 1946 the Infants' Hospital and the Surgical Appliance Shop, Inc. were already closely affiliated with the Children's Hospital, and administered by it. Since then, under agreements of varying terms, but all of the same general purport, the institutions listed below also joined as affiliates, at the dates set opposite their names:

| | |
|---|---|
| The Sharon Sanatorium | 1946 |
| The House of the Good Samaritan | 1946 |
| The Wellesley Hospital and Convalescent Home | 1946 |
| Children's Cancer Research Foundation | 1948 |
| The Children's Mission to Children | 1949 |
| Judge Baker Guidance Center | 1953 |

Pursuant to the general plan and with the agreement of the parties concerned a number of administrative changes have been made, all of which have resulted not only in economies, but a division of work between the affiliated institutions which has avoided duplication and in a more efficient conduct of the work of the various units, and of the work of the whole group.

Recently an Executive Committee of The Children's Medical Center, Inc. was appointed consisting of the Presidents of the affiliated institutions and of the President and Treasurer of the Children's Medical Center. The Executive Committee will hold regular meetings and it is expected that from them will develop suggestions for further co-operation in various phases of the common problems in which all the affiliated, institutions are interested, and for further developments of the work of the affiliated institutions and of the Children's Medical Center.

Various advantages, in fact as well as theory, have resulted from the plan of affiliation of the various institutions in the Children's Medical Center. Duplication of work has been avoided, economies in operation have been made, the field of service to the community has been enlarged, better and more effective work has been done in many ways and increased funds have been made available.

It appears, for instance, that the general plan has been effective in stimulating increased donations not only from contributors solicited in so-called "campaigns" for capital funds, but also in grants of special funds, normally expendable within a few years, from foundations and others for research and other special work.

From 1933 through 1946 both inclusive, for instance, grants for such special funds to the Children's Hospital aggregated only about $275,000, or an average of only $21,000 a year.

From 1946 through 1953, even after eliminating funds which as far as we could ascertain were produced by campaign efforts, grants for such special funds aggregated nearly $4,000,000, or an average of nearly $500,000 a year. It is believed this may be fairly considered an indication of one of the indirect results of the general plan of the Children's Medical Center and affiliated institutions.

The plans for a Children's Medical Center met when first announced some criticism, both locally and nationally. It is believed, however,

that such criticisms have almost entirely ceased. The following statement in the President's Report of February, 1952, might today be made even stronger:

> "Distinguished authorities in the world of pediatrics who have followed closely the development of our plans have stated that the establishment of the Children's Medical Center marks the beginning of an epoch in the history of child care. And it is also interesting to learn that in several other large cities the principles underlying the development of the Children's Medical Center have been adopted as the basis for the provision of better care for the whole child, and for the advancement of medical science in the field of pediatrics."

That such a statement can be ventured is owing partly to the soundness of our plants, but more to the efforts of all concerned, – the chiefs of the services who have worked together, the professional staffs, the trustees and corporation members of the affiliated institutions, the executives of the campaigns for funds, and the volunteers who have done so much to increase available resources. To all these deep gratitude is due.

But for better or worse, the past is behind us. Our concern and efforts must be directed towards the future.

It must be realized that what has been done thus far is after all merely a beginning of the plan to bring to bear on the problems of pediatrics and general care of children the resources of all the techniques and knowledge available, or to become available, for that purpose. The underlying concept remains. It is to provide, in one group of institutions, all the skills which may assist in the total care of the young and the advancement of medical science applicable to children.

We have still far to go.

Much can and should be done to advance the knowledge and application of preventive medicine, to better understand the needs and psychiatric difficulties of children and the physical and mental problems of adolescents, to co-operate more closely with practicing doctors throughout New England, to furnish more effective help in education, particularly that of handicapped children, to improve our ambulatory services, to provide at lower cost services to families of moderate means, to provide better social service, to constantly improve the clinical work in all departments, to advance by research the knowledge and application of the science of medicine, and to help, and if possible, to lead in the momentous advances in pediatrics which are impending.

The Children's Medical Center must never become static.

# Administrator's Report

Quantity and quality of accomplishment in all professional fields are apparent in the reports of Unit and Departmental activities. What this accomplishment means in terms of medical progress and service may be more readily assessed by the professional than the non-medical reader. There is a natural medical preference for understatement and frequently for anonymity. Desirable as this undoubtedly is professionally, it does not assist the lay public to understand the achievements of a great teaching hospital and medical center.

Administration of most of the units of the Children's Medical Center is becoming integrated at 300 Longwood Avenue. Satisfactory progress has been made in administration, management and finance. The economy and other practical advantages which have resulted from a unified accounting operation were among the practical benefits foreseen when the Children's Medical Center was organized.

Concentration of administration, however, is beginning to produce an unforeseen dividend at this time when active planning is in progress for the new building. Tearing down old buildings to make room for new construction cannot be delayed but all facilities must be kept in active and effective operation. The ability to plan in close detail and also to make best use of the combined facilities offered by the various units of the Children's Medical Center is likely to be a major benefit of affiliation for which we shall be increasingly grateful in the difficult months to come.

During recent months an intensive survey of current activities and future needs has been undertaken as well as a review of management practices. A methods engineering program has been initiated with special emphasis on education in work simplification which is being extended to the employee level. Operating benefits are already apparent as a first result of this endeavor to organize the labor force to maximum effectiveness. Although the same criteria cannot always be applied, a hospital should be expected to operate with the degree of

efficiency demanded in any well-run business. If for no other reason, today's high costs make it essential to do everything possible to attain this end.

Cost per patient-hour at both the Children's and Infant's Hospitals is almost exactly $1.25. Of this amount "bed and board" costs, including medical attention of the house staff and nursing, account for only about 75¢. The balance represents the cost of the expensive "stand-by" services, x-ray, laboratories, operating room, to name only a few in a long list.

Hospitals are understandably sensitive on the subject of their costs which for good and unavoidable reasons have risen more steeply in recent years than even wages or the general price index for commodities. But offsetting the heavy apparent increase in the cost of hospitalization is the progressive reduction in the average length of hospital stay which has become so marked in recent years. A decade ago, for instance, the average stay at the Children's was sixteen days; today it is approximately eight. This helps to mitigate materially the burden of hospital costs for the individual while, as far as the hospital is concerned, beds do double duty with great benefit accruing to the community.

The Children's Medical Center comprises a twenty-three million dollar business with costs of service approaching three million dollars annually, – a figure considerably in excess of the amount we actually set out to collect, for, as voluntary hospital agencies, service to the public is the first objective. During the year the hospital units of the Center provided approximately one hundred thousand days of bed care. There were more than 70,000 out-patient department visits and about 11,000 customer items were supplied through the Charitable Surgical Appliance Shop. These figures are only important insofar as they indicate statistically immeasurable services provided for the New England Community, to the nation as a whole and indeed to the world by the several units of the Children's Medical Center.

# The New Building

Just before the close of the financial year the trustees made the welcome decision to start construction of the new building. Occupying a position across the heart of the Children's Hospital site some rather complicated and detailed planning will be needed to keep as many existing facilities as possible in uninterrupted operation. The new building has, in fact, been designed to permit the Orthopedic beds on Division 5 and the surgical facilities in the operating pavilion to remain in use until they can be moved into their new quarters. At that time the old buildings will be demolished and their places taken by a driveway entrance to the new building.

The service designation by floors is as follows:

Ground – Kitchen, General Stores, Telephone Switchboard, Mail Room.
First – Cafeteria, Coffee Shop, Gift Shop, Nursing Administration, Accounting Office, Information Desk, Waiting Lobby, Chapel, Parent retiring rooms.
Second – X-ray suite, Orthopedic Service offices, other clinics.
Third – Surgical Suite, additional Neurosurgical beds.
Fourth – Surgical Division
Fifth – Private Division
Sixth – Orthopedic Division
Seventh – Medical Division
Eighth – Tumor Therapy Division, Premature Nursery, Central Supply.

Some of the most desirable provisions of the New Building are:

- A playroom on each floor
- Ample provision for parents' rooms
- A classroom on each floor
- An elevator direct from Central Supply to the Surgical and X-ray suites as well as to each new Treatment Room
- A pneumatic tube system which will greatly decrease the amount of walking required
- Provision for 4 elevators strategically located
- A wide expanse of windows on all patient floors

# The Children's Hospital

*The Children's Hospital was founded in 1869 occupying a house at 9 Rutland Street. The first patient to be admitted was a child suffering from congenital dislocation of the hip, thus representing the first step in a distinguished orthopedic tradition.*

*When the Children's was first established the concept that the diseases of children might provide a separate area for study and treatment was still revolutionary and contemporary professional Boston accepted the novel idea of a special hospital for children with misgiving. Yet within a year more room had to be found and a move was made in 1870 to 1429 Washington Street. In 1882 another move was made, – this time to a new building put up at a cost of $125,000 at the corner of Gainsborough Street and Huntington Avenue. Here the hospital remained until 1914 when the move to the present location at 300 Longwood Avenue was completed.*

REPORT OF THE

# Medical Department

*For the year ending September 30, 1953*

CHARLES A. JANEWAY, M.D., *Physician-in-Chief*

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## GENERAL

*The Children's Medical Center*

In the past six years so much has happened that it is easy to take for granted the broadening of our horizons and the diversification of possibilities for care of children and for study of their health problems which has come about as a result of the development of the Children's Medical Center. Today, as a beneficiary as well as a participant in this development, the Medical Department finds itself supported by an array of specialized medical and scientific talent in the other clinical departments and research laboratories of the Center and faced with clinical, educational, and investigative opportunities which could not be duplicated anywhere else. This places a heavy responsibility upon us for the future.

*Psychiatry*

Rapidly increasing demand for psychiatric services and for collaboration in research on the psychological components of many diseases within the whole Medical Center has resulted in the rapid growth of the psychiatric division during the past three years. It became clear that a person of mature judgment, wide experience, and a national reputation in the field of Child Psychiatry was needed to take charge of this important new development.

It is a tremendous satisfaction therefore that Dr. George E. Gardner has been appointed Psychiatrist-in-Chief and head of the Department of Psychiatry. He will continue as Clinical Director of the Judge Baker Guidance Center, while also holding teaching appointments as Clinical Professor of Psychiatry at the Harvard Medical School and Lecturer in Social Relations in the University. Dr. Gardner is in a

unique position of being able to tap the resources of a great university and such diversified clinical facilities for his teaching, research, and service to patients. We welcome him most cordially into the Children's Hospital family.

The Judge Baker Guidance Center becomes formally affiliated with the Children's Medical Center on the first day of the new financial year.

In the resulting reorganization, these changes were made as from October 1, 1953:

(1) The Division of Psychiatry of the Department of Medicine has been replaced by a Department of Psychiatry, on an equal footing with other Departments (Medicine, Surgery, etc.)

(2) The staff of clinical psychologists who have been working in the Neurological Division, the Adolescent Unit, and the Psychiatric Division have been organized into a Division of Clinical Psychology under the Department of Psychiatry. They are thus made administratively and professionally responsible to Dr. Gardner.

(3) Dr. Prugh, who did so much to give psychiatry a good start in the Hospital, remains a member of the Department of Medicine, in charge of the Brenton Unit for Psychological Pediatrics, but also holds an appointment in the new Department of Psychiatry. His particular responsibility will be to push forward research on the emotional components of health and disease and to teach those who plan to practice pediatrics rather than psychiatry. Support for some of this work has been provided by the Hood Foundation.

*Dr. Lightwood's Visit*

Several years ago Dr. Reginald Lightwood, Director of the Paediatric Unit at St. Mary's Hospital Medical School, London, proposed an exchange of residents. The plan, now in its third year, has proved so successful that it seems here to stay. Our residents sent as exchange "Registrars" have returned full of enthusiasm for the friendly reception they received, and for what they learned by participating in the work of one of Britain's best pediatric teaching units. We have benefitted enormously from the splendid clinical training which those from St. Mary's have brought to their work as Senior Assistant Residents here.

It was a particular pleasure to have Dr. Lightwood himself here for a period of two weeks this fall as Visiting Physician-in-Chief, when he won respect and friendship during his too brief visit. In his Blackfan Memorial Lecture, the first of a series made possible through an annual gift of the Children's Hospital Alumni Club, he described a

newly-recognized clinical entity, frequently referred to as Lightwood's syndrome.

## Services to the Community

*Statistics*

Until there is another great technical advance comparable to the introduction of the antibiotics, it seems likely that our hospital census will show little fluctuation. We are fortunate in starting new hospital buildings at a time when the most recent wave of medical advances resulting in a marked reduction of hospital stay for most children appears to have exerted most of its effects. (Vide Table I).

On the medical wards during the six years since 1947, admissions have increased by 48%, while the average stay has decreased by 42%. With a decrease of only 16% in the total number of hospital days, this means more children cared for in fewer beds. On the Children's medical service, the average stay has dropped from 14 to 5.7 days in six years, and on the Infants' service it has dropped from 16 to 8.6 days.

Table II shows a heavy apparent increase in visits to the Medical Out-Patient Department. The Emergency Clinic especially has grown rapidly in the past few years. It is here that acute cases coming to the hospital without appointments are seen and is therefore a very important place for training house officers and medical students in managing common pediatric problems.

The newly formed Adolescent Unit, in particular, has grown with a rapidity which is particularly gratifying, indicating that it is filling a very real need, the extent of which perhaps had not been fully appreciated.

*New Trends*

Certain new trends in services to patients deserve emphasis if only because they represent an adaptation of practices to changing needs.

*Development of new special services* – Growth of work in special fields allied to medicine such as speech therapy, remedial reading, play therapy, clinical psychology and educational counselling, indicates the growing interest in problems of adjustment and rehabilitation.

*Functional relationships with community agencies,* both public and private, continue to expand. Individual members of the staff serve numerous hospitals and community health agencies in many capacities. The Hospital, also, provides more formal service to other agencies such as the Hayden Goodwill Inn, the Industrial School for Crippled Children and the Boston Nursery for Blind Babies.

*The combined approach of several departments or divisions* in an attack on a particular problem is becoming more common every year. A joint clinic, involving pediatrics, orthopedics, neurology, and neuro-

surgery in the care and study of patients with Muscular Dystrophy is the latest such venture.

*Group therapy* for the management of patients or parents of patients with a common problem, such as epilepsy, has been studied by the psychiatric group during the past year, under the guidance of Dr. Leo Berman and may well become an important method of treatment.

*The Adolescent Unit* is particularly noteworthy for its efforts to focus attention on the overall needs of the patient as a person. Opened only a year ago, on October 1, 1952, the Unit at the time of writing is already dealing with no less than 300 patients a month.

## Teaching

*Undergraduate* medical students from the Harvard Medical School are an integral part of the life of the Hospital. Approximately 240 students from the third and fourth year classes received training last year.

*Graduate* teaching continued much as before:

*The House Staff.* In-patient services required a staff of a chief resident, eight senior assistant residents, twelve junior assistant residents, and four internes. Out-patient services were provided by a group of clinical fellows and affiliated residents (from the Beverly, Beth Israel, Mount Auburn, and Rhode Island Hospitals) under a chief resident.

*Research fellows and trainees* in such special fields as cardiology, hematology, neurology, and metabolism, were active in research and in the care of groups of patients under special study.

*Graduate student teaching* under Dr. Eley's supervision, originally designed as a refresher for men returning to civil practice after long periods of military service, now trains physicians for pediatric practice both here and abroad. Today alumni are scattered all over the globe.

A successful series of Wednesday afternoon conferences, devoted to the practical aspects of pediatrics, was inaugurated, particularly for general practitioners upon whom most of our children depend for medical care.

*General.* In addition to a large number of men from many parts of the United States, in training as house officers and research fellows, it is of interest that last year, appointments in the Medical Department were held by representatives of 24 foreign countries (Australia, Belgium, Canada, China, Denmark, England, Esthonia, Finland, Formosa, France, Germany, Holland, Iraq, Ireland, Israel, Italy, Japan, Mexico, New Zealand, Norway, South Africa, Sweden, Switzerland, and Venezuela.)

TABLE I

MEDICAL IN-PATIENT SERVICES

| | | *1947* | *1948* | *1949* | *1950* | *1951* | *1952* | *1953* |
|---|---|---|---|---|---|---|---|---|
| Children's + Infants' Hospitals | Admissions | 2,261 | 2,749 | 3,350 | 3,032 | 2,622 | 3,326 | 3,354 |
| + Sharon Cardiovascular Unit | Hospital days | 33,926 | 29,956 | 35,625 | 32,128 | 32,116 | 29,039 | 28,602 |
| Medical Wards | Average stay (days) | 15 | 11 | 10.7 | 10.6 | 12.3 | 8.7 | 8.6 |
| Children's + Infants' Hospitals | Admissions | 2,677 | 2,668 | 2,586 | 2,632 | 2,677 | 2,833 | 2,996 |
| Private Patients (All Services) | Hospital days | 15,769 | 14,765 | 13,787 | 14,026 | 13,297 | 12,822 | 13,761 |
| | Average stay (days) | 5.9 | 5.5 | 5.3 | 5.3 | 5.0 | 4.5 | 4.6 |
| Wellesley Convalescent Home | Admissions | 332 | 341 | 349 | 231 | 227 | 219 | 171 |
| and Hospital | Hospital days | 16,055 | 14,713 | 14,891 | 12,545 | 11,786 | 12,580 | 11,089 |
| | Average stay (days) | 48 | 43 | 43 | 54 | 52 | 57 | 65 |
| House of the Good Samaritan | Admissions | 132 | 157 | 193 | 179 | 189 | 224 | 190 |
| | Hospital days | 16,637 | 17,306 | 21,881 | 18,094 | 16,559 | 17,102 | 18,255 |
| | Average stay (days) | 126 | 110 | 113 | 101 | 86 | 76.3 | 96 |

TABLE II

Visits to Medical Out-Patient Department

| | *1950* | *1951* | *1952* | *1953* |
|---|---|---|---|---|
| TOTAL VISITS | 25,210* | 24,158* | 24,425* | 28,213 |
| General Clinic | .... | 10,464 | 7,922 | 8,171 |
| Special Clinics | .... | 10,217 | 11,177 | 14,688† |
| Emergency Clinic | 2,938 | 3,477 | 4,798 | 4,844 |
| Isolation Emergency Clinic | .... | .... | 528 | 510 |

## Research

Research is intimately linked with care of patients and teaching, and is the peculiar responsibility of a hospital closely affiliated with a university. Our standards of care attract patients to the Children's Hospital as a highest court of appeal in difficult cases. The quality of our teaching attracts physicians for training from far and wide thus ensuring the higher caliber of the house staff upon whom our standards of medical care depend. Both care and teaching are directly dependent on the fact that in our wards, clinics, and laboratories the quest for new knowledge is increasing. For every medical problem of children there is available a wealth of talent and experience in all fields of clinical endeavor as well as an outstanding group of laboratory workers commanding facilities which it would be difficult to duplicate.

Research grants, providing support for the major part of the salaries and all of the research expenses of many of those engaged in full-time work, are essential to the comprehensive program of care, teaching and clinical and fundamental research at the Children's Medical Center. The Medical Department is fortunate in having a considerable university budget for the continuing support of a small nucleus of full-time teachers and investigators. Yet during the year under review research grants provided an item for salaries alone which was nearly twice as

* These figures do not include:

| | *Visits* |
|---|---|
| Adolescent Unit Clinic | 600 (9 mos.) |
| Cerebral Palsy Unit | 278 |
| Child Health Unit Clinics | |

† Including Adolescent Clinic

much as came from Harvard University and over eight times as much as came from the Hospital's general funds.

Dependence upon research grants has now become almost universal in progressive academic institutions, particularly private voluntary ones. This has created serious problems. Among them are lack of security for people whose support depends upon short-term grants; slanting of research towards immediately practical ends rather than towards long-term goals ultimately more productive; the large amount of time consumed in purely administrative tasks. Special grants, however, have made possible much of the progress in recent years, not only in research, but also toward the development of comprehensive programs of both medical care and teaching.

## Reports of Special Medical Divisions

### *Allergy*

Dr. Lewis Webb Hill reported an active year. Research has been carried on concerning the value of cortisone in the treatment of infantile eczema, the use of a cooling device to prevent the pain of hypodermic injections, and reactions to bee and wasp stings.

### *Adolescent Unit*

The rapid progress of this new and important division under Dr. Gallagher's leadership, has been referred to above. Collaboration with certain members of the Peter Bent Brigham Hospital staff in a study of menstrual disorders in girls and further extension of work on specific language disabilities have been two major special endeavors.

### *Cardiology Division*

Dr. Nadas, Chief of the Cardiac Clinic, physician to the Sharon Cardiovascular Ward, and also director of the Electrocardiographic Laboratory of the Division of Clinical Laboratories, reported approximately 1500 visits of patients to the Cardiac Clinic and 239 medical admissions to the Sharon Unit. Three fellows were in training in the Cardiology Division.

The Cardio-respiratory laboratory under the direction of Dr. Walter Goodale carried out physiological studies for diagnostic purposes on 165 patients during the year and has contributed to the joint study of atrial septal defects with the Surgical Department.

Research funds have come to the Cardiology Division from the Massachusetts Heart Association, the Webster-Underhill Fund, the National Heart Institute of the U. S. Public Health Service, and the

Sonnabend Fund of the Harvard School of Public Health. Several gifts from individuals, notably those from Mr. Matthew Berman and Mr. Isadore Sherman, have permitted the purchase of specially needed items of equipment.

Major cardiac investigations have been concerned with the recognition and evaluation of patients with atrial septal defect, a congenital lesion for which Dr. Gross developed a new and ingenious operative procedure; with the compensatory adjustments of the blood of "blue babies" to this physiological difficulty; with the use of digitalis in infants; and with the clinical recognition of two groups of cases, those with primary disease of the heart muscle and those "blue babies" with congenital closure of the main artery to the lung on one side, which is a point of great importance to the surgeon.

*The Rheumatic Fever Clinic,* under Dr. Massell, Research Director of the House of the Good Samaritan, has continued to supervise the care of patients with this disease.

*The Child Health Unit*

This division is directed by Dr. Dooley; Dr. Stuart, Consulting Physician. Since over half the time of a modern pediatrician is spent in the care of well rather than sick children, the Unit is important as a clinical center for teaching health supervision to medical students and house officers, and as a demonstration unit for nurses and public health students. Dr. Stuart's long-term studies of the growth of children were also continued.

*The Hematology Division*

This division, under Dr. Diamond, includes the Hematology Clinic, the Hematology Research Laboratory, the Blood Bank for the Medical Center as a whole, and the Blood-Grouping Laboratory. Although the last is a separate institution, it is closely coordinated with Hospital activities in hematology, particularly in research upon blood groups and the problem of erythroblastosis fetalis. During the year, a reorganization allied the Hematology Research Laboratory in its routine services, with the Division of Clinical Laboratories.

In research, long-term studies on the treatment of Rh disease were continued. The results show in a marked lowering of mortality, and, in recent years, a marked decrease in the severe neurological damage which used to be a frequent complication in survivors. Support for these various activities came from private donations as well as from the Blood Grouping Laboratory, the National Institute of Health of the U. S. Public Health Service and the Atomic Energy Commission.

*The Metabolism Division*

This division (Dr. Metcoff, Chief; Dr. Gamble, Consulting Physician), has continued both to be productive in research and to provide important expert services for patients with metabolic problems on all services. There are two out-patient clinics, – the Nephrosis Clinic and the Diabetic Clinic and a small metabolic study unit on the Sharon Ward.

Research is concerned with the broad problem of the regulation of the composition of the body fluids and tissues and with the rational treatment of disturbances in their composition. In collaboration with the Departments of Orthopedic Surgery and Pathology, muscle tissue is now under active investigation in the hope of gaining basic knowledge which will throw light on the nature of progressive muscular dystrophy, an important crippling disease.

Support for research in progress has come from the National Heart Institute and the National Institute of Arthritis and Metabolic Diseases of the U. S. Public Health Service, the Playtex Park Research Institute, the Ella Sachs Plotz Fund of Harvard University and funds given in memory of Barbara Strauss, Dr. Alfred Shohl, and Dr. Kenneth Blackfan. Certain investigations have been greatly facilitated by collaboration with Drs. John Craig and Benjamin Landing of the Department of Pathology and by the use of equipment in the laboratories of the Children's Cancer Research Foundation.

*Neurology Division*

This is one of the most heavily burdened divisions of the Medical Department, because of the large number of handicapped children who are brought to this Hospital as a last court of appeal for appraisal of their difficulties. The staff of the Neurological Division provide daily consultation services in the Medical Out-Patient Department, through the Neurological Clinic, which is operated during the sessions of the general medical clinic. They participate in the evaluation of patients in the Cerebral Palsy Clinic, provide extensive consultation service on the wards, and operate the Neurological Ward (Division 9).

The Neurological Ward is an unusually valuable facility. Operated more like home and less like a hospital ward, its primary purpose is observation of the behavior of children who are not acutely sick and hence can be up and about. The staff includes a teacher to supervise and to observe the children's play and other activities. She is able to participate with doctor, nurse, and clinical psychologist in preparing an intelligent plan for the child's education, physical rehabilitation, vocational training, and home management.

The work has been strengthened greatly through new resources

resulting from Dr. Farber's and Dr. Berenberg's efforts in Cerebral Palsy. Research work upon the follow-up of cerebral palsy patients over a 25 year period by Dr. Crothers, assisted by Dr. Richmond Paine, is supported by the National Institute of Neurology and Blindness of the U. S. Public Health Service and by the United Cerebral Palsy Association.

The Lead Industries Fund continues partial support of Dr. Byers' work in connection with the diagnosis and treatment of lead poisoning.

*Clinical Psychology* activities under Dr. Edith Meyer have expanded steadily with the result that there are now unusual opportunities for training in evaluation of neurologically handicapped children. There are now two internes in Clinical Psychology. The training program was inspected during the year by Dr. Karl F. Heiser, Coordinator of Research and Chairman of the American Psychological Association Education and Training Board who commended it highly for both content and quality.

*The Seizure Unit,* under Dr. Lennox, asisted by Drs. Davidson and Lombroso, has been extremely busy with fellows from many parts of the world. Support for its active program of patient care, training, and research on the mechanism, drug therapy and social consequences of epilepsy has been provided by income from patients, grants from the Veteran's Administration and from the Children's Bureau, by way of the Services for Crippled Children of the Massachusetts Department of Public Health.

*Psychiatry Division*

This has been covered above.

*Speech Therapy*

Dr. Lois Mayper, Director of Speech Therapy, who is also Vice-President of the Massachusetts Speech and Hearing Association, reported 200 new patients seen in the Speech Clinic of the Medical Out-Patient Department last year, with 450 return visits for treatment and follow-up. Group therapy is being tested with two groups of patients, – one of children with delayed speech and another of young stutterers and their parents.

*Other Activities*

Research by members of the medical staff is going on under the auspices of other departments or closely affiliated institutions as follows:

| | | |
|---|---|---|
| Dr. Massell | rheumatic fever | House of the Good Samaritan |

| | | |
|---|---|---|
| Dr. Weller | virus cultivation | Division of Laboratories and Research |
| Dr. Shwachman | chronic nutritional failure | Division of Laboratories and Research |
| Dr. Clement A. Smith<br>Dr. Charles D. Cook | physiology of premature infants | Boston Lying-in Hospital |
| Dr. Gellis<br>Dr. David Hsia | liver disease and metabolic disorders | Beth Israel Hospital |
| Dr. Benjamin G. Ferris and associates | respiratory poliomyelitis | Mary MacArthur Respirator Unit (Wellesley Convalescent Home) |

Space does not permit acknowledgement to all those individuals who have contributed loyally to the work of the Department during the past year. To Miss Vesey and the Nursing Department particularly we should like to express our appreciation for their patience and perseverance in maintaining our standards of care despite the physical difficulties of our plant and the large number of changing medical personnel with whom they must deal. To Dr. Leonard Apt, Dr. John Hartmann, and Dr. Ransom Arthur, each of whom performed the duties of Chief Resident during part of the year, and to Dr. Henry Lang and Dr. Alexander Blum who served as Chief Out-Patient Residents, go our special thanks for carrying their heavy responsibilities very ably and for providing leadership for a fine group of house officers. To all the members of the Medical Staff, and particularly my assistant, Dr. John Tuthill, I can only say, "Thanks again for the loyal support, friendly counsel, and devotion to the Hospital and its patients, which has made this a good year."

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REPORT OF THE

# Department of Surgery

*For the year ending September 30, 1953*

ROBERT E. GROSS, M.D., *Surgeon-in-Chief*

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At the present time the major activity of the Surgical Department consists of making plans for a shift in housing facilities which will be necessary within a month when our old Ward 4 pavilion must be torn

down to make space for the new building which is to be erected on the site. Other departments in the hospital have very kindly agreed to shift and loan beds in a way which will permit us to acquire a suitable number of accommodations in other parts of the hospital, so that we can carry on the activities of the Department during the next two years while the new building is being erected. Obviously, these dislodgements will raise many new problems of management and handling of patients under conditions which are far from ideal, but everyone approaches this era with cheerfulness, fully prepared to handle these various matters as well as possible, knowing that it is all temporary and that within a few years we will be able to move into permanent and modern quarters which the Trustees and the many friends of the hospital will make possible within the new structure.

As we approach the time when Ward 4 will be demolished, we cannot help but have mixed feelings. For more than thirty-five years this unit has served its purposes in an admirable manner. In this area it was possible for Dr. Stone to organize and bring forth the first significant Children's Surgical Service in the country, and it was here that Dr. Ladd studied and treated a wide variety of conditions leading to his many outstanding contributions to the field of Children's Surgery. Beginning here with only one or two interns, the house staff has progressively gone through stages of organization and enlargement so that it is now an important postgraduate teaching unit. On this ward literally thousands of Harvard Medical Students have come face to face with surgical problems of childhood and have been taught appropriate therapy for the various lesions. Here there have been many night-long struggles, many disappointments, and indeed fatalities, but fortunately these have been overshadowed by a long stream of patients, probably approaching 25,000, who have been given a new lease on life by the surgical treatments which have been given here. We hate to see the ward go, but everyone realizes that progress must be made and that the old pavilion must give way to safer, more effective, and modern buildings. We are deeply grateful for the opportunities which this ward has given us in the past; we must make certain that the spirit of the place is carried over into our new plant.

During the past three years the volume of work on the Surgical Service, measured in terms of total number of operations, has progressively increased. However, even with this rise, the number for the current year falls a trifle short of the all-time high which occurred in 1950.

With the disruptions which have badgered house staffs the country over (by men withdrawing to undertake military duty) there have been considerable readjustments of training programs. At times it has been difficult or indeed impossible to keep a house-staff at full strength.

However, we have been much more fortunate in this regard than is the case with many institutions. Our present group is composed of men of extraordinary calibre and we are most fortunate in having them with us to assist in carrying the load of patient-care on both our service and private cases. As always, these men have taken a high degree of responsibility and are to a large measure responsible for the outstanding therapeutic results which the Surgical Service has been able to offer the public.

In the Laboratory for Surgical Research our efforts have been directed particularly along the lines of development of additional procedures for the treatment of interauricular septal defects of the heart. From these investigations much progress has been made in the perfection of techniques which now make it possible to attack these abnormalities in a deformed but beating organ. We thus have added to our armamentarium one more tool for the treatment of cardiovascular defects in children.

We are particularly happy to report on the activities of Dr. Thomas H. Lanman who very graciously — and in a most competent way — has accepted the responsibility of directing the office and the affairs of the Alumni Association of the Harvard Medical School. Under his guidance the graduates of the school have been knitted into an organization which is vastly more effective than ever before. Already there has been a tremendous increase in the monetary contributions to the school from these doctors. This most encouraging and substantial support for the finances of the school is of prime concern to all of us and we are justifiably proud that Dr. Lanman has made this important contribution to the welfare of the Hospital-Medical School family.

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REPORT OF THE DEPARTMENT OF

# Orthopaedic Surgery

*For the year ending September 30, 1953*

WILLIAM T. GREEN, M.D., *Orthopaedic Surgeon-in-Chief*

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A high level of activity on the Service has been maintained throughout the year. The number of In-Patient days during the year was 15,763, which is an increase of 25% over the previous year. The

number of Out-Patient visits in all the Orthopaedic Divisions totalled just under 20,000 of which 11,022 were in the general Orthopaedic Out-Patient Clinic. This represented a decrease of approximately 8% from the preceding year. The number of surgical operations was essentially the same as the previous year, namely, 526 as compared to 512. It is well to remember that the number of listed surgical procedures represents only a part of the orthopaedic procedures that are performed, since many of these, even though of considerable magnitude are performed in the Plaster Room, and in the X-ray Department.

## Teaching

There have been no major changes in either undergraduate or postgraduate teaching. The important postgraduate teaching has to do with our resident program but, in addition, a few applicants are accepted each year as graduate students of the Department under the Courses for Graduates at the Harvard Medical School. The special clinical course in Poliomyelitis for physicians was given in June and again in August. There were 29 students enrolled in the June course, and 22 in the August course; 23 States were represented by this group, including one foreign country. The teaching in these courses was a conjoined effort of various departments, and was enthusiastically received by the students. In addition, our staff participated in the instructional courses in Poliomyelitis for nurses and for physical therapists. These courses have been developed in collaboration with the National Foundation for Infantile Paralysis; and the whole program has been a very satisfactory one.

When you consider the teaching activities of the Department, it seems well to mention that the department head is Co-Director of the Simmons Program of Physical Therapy and that a large part of the faculty of this program are at the Children's Medical Center, including the Technical Director of the Program, who is our Chief Physical Therapist. The teaching activities at all levels keep members of the department very busy. The residents, themselves, have been much more active in this area since the number of undergraduate nursing courses has been increased. Still further demands are made by the graduate courses in Orthopaedic Nursing.

## Staff

It is with great regret that we record the death of Dr. Helge Hertz during his appointment here as Research Fellow. Dr. Hertz was on leave of absence from his position as First Assistant in the Institute of Neurophysiology in Copenhagen. He was a distinguished investigator and was conducting a study of the electromyographic changes occur-

ring in muscle effected by Poliomyelitis. Dr. Hertz became critically ill when he was away from Boston, and although he was flown back here from Salt Lake City for the use of the artificial kidney at the Peter Bent Brigham Hospital, he died on June 6, 1953. All of us came to know Dr. Hertz as a brilliant scientist and the kindliest and most likeable of men. The sympathy of all of us goes out to Mrs. Hertz who was working with him in his research project here as a technical assistant.

## Research

*Margaret A. Saltonstall Laboratory*

The initial project in the laboratory newly established through the generosity of John L. Saltonstall as a memorial to the late Margaret A. Saltonstall, was a study of the prognostic value of electromyography in poliomyelitis, supported by grants from the National Foundation for Infantile Paralysis. This work, initiated by the late Dr. Helge Hertz with the technical assistance of Cleo Hertz, was completed by Dr. Fritz Buchthal and Dr. Annalise Madsen. The technical aspects of this investigation were completed in August and the initial report will be made at the meeting of the American Orthopaedic Association in June, 1954. The present project in the Saltonstall Laboratory has to do with the electromyographic changes occurring in muscular dystrophy. The electromyographic equipment has been added to the permanent equipment of the Saltonstall Laboratory.

*Growth Study*

Particular emphasis in our study of growth, in addition to the accumulation of longitudinal data regarding human growth, has been upon certain of the mechanisms by which growth is affected. Some of the studies during this period may be listed; the development of standard curves of growth of the normal foot; the effect of paralysis of varying degrees upon the growth of the foot; the development and use of a technique for the roentgen measurement of the length of the foot in standing position; the circulatory changes occurring in the first forty days of Poliomyelitis; the effects of rest and immobilization of the lower extremity upon the circulation and growth of the extremity; and the stimulative effect upon bone growth of miscellaneous operative procedures on the extremity which are not designed to modify growth. Some of this latter work has been handicapped by the lack of a completely satisfactory temperature and humidity controlled room.

*Other Areas*

Other areas of laboratory research include such projects as a study of the use of irradiated bone as a source of sterile bone grafts and

another which is a short and long term tracer study of radioactive calcium in bone and in blood, including a study of the performance of bone grafts as evident by such tracer studies. Various phases of clinical research have been conducted by members of the department including an investigation of osteochondritis dissecans, further exploration of certain aspects of surgical treatment in Poliomyelitis and a study of life history of the so-called simple bone cyst.

## The Massachusetts Infantile Paralysis Clinics

These clinics, conducted as a separate Unit by the Orthopaedic Service, have had a busy year despite the fact that the incidence of Poliomyelitis in Massachusetts was not high during the period. In all there were 9,021 visits to the Unit affecting 1,822 individual patients and 257 new cases were admitted.

In addition to the Central Clinics here at the Children's Hospital, weekly treatment clinics were conducted in eleven cities and towns in Massachusetts. The Central Clinics and the various treatment clinics work closely with various other organizations which aid in the support of these activities. The various Chapters of the National Foundation for Infantile Paralysis support the care of patients in their respective areas on an annually computed cost basis while certain cities and towns support the cost of their own treatment clinics. The Home Care Program of our clinics works in close relation to the Visiting Nurse Association and with their Physical Therapy Division with the Red Cross aiding in the transportation of patients. In addition many others, — individual volunteers and philanthropic organizations, assist in the total program.

During the year, the quarters of the Central Clinics have been extensively renovated using special provided funds. These changes add to the appearance of the area and have already demonstrated their worth as contributing greatly to the efficiency both of the Polio and of the Cerebral Palsy Clinics.

The Functional Training Room, established as a memorial to Dr. Arthur Legg, is one of the pioneer areas of activity in what is popularly described as Rehabilitation and in the so-called Rehabilitation Clinics. Some activities during the year were curtailed by the shortage in physical therapists. This handicap was not peculiar to us, although we are better off than most, for the shortage is a nation-wide problem.

The Functional Training Room is devoted in great part to teaching the physically handicapped individual to perform the common every day tasks that are necessary to normal living. It was used extensively for supervising gait training but detailed training of severely handicapped individuals in functional activities using the upper extremities

was not as diversified nor as extensive as we would have liked to have it. It is to be hoped that during the ensuing year, personnel can be added to permit more extensive efforts in this area of functional training. The continued support of the Arthur Legg Memorial Room by NOEMI UOTS #11 is very gratifying.

Problems of vocational counselling in job placement for the physically handicapped still remain unsolved although greater cooperation between the clinics and the State Vocational Rehabilitation Program has been developed. The program that we had hoped to develop with the Vocational Counselling Division of Boston University had to be abandoned because of inability to obtain funds for its support. This is an important activity and we hope that it can be established for most individuals physically handicapped by Poliomyelitis, if directed and trained in the proper vocation can become economically independent.

## General

The report of the Respirator Unit is given elsewhere. The Departmental activities in the Units of the Children's Medical Center other than the Massachusetts Infantile Paralysis Clinics and the Respirator Unit are included in the General report. These embrace particularly activities in the Adolescent Unit, consultative functions at the Good Samaritan, and the care of patients at the Wellesley Convalescent Home.

The papers, publications and certain other activities of members of the department are listed at the end of the report. One of the major extra-curricular activities of the Chief of the Department has to do with the American Board of Orthopaedic Surgery in its many ramifications.

It is a great feeling to realize that the construction of a new major building will get underway next month. All of us stand and cheer the trustees for putting into reality this ambition of all of us. The Children's Medical Center is on the move.

REPORT OF THE DEPARTMENT OF

# Neurosurgery

*For the year ending September 30, 1953*

FRANC D. INGRAHAM, M.D., *Neurosurgeon-in-Chief*

## GENERAL

Admissions at 475 for the year registered a rise of nearly 15% over the previous year, thus continuing the upward trend which has been apparent for some time. Approximately the same number of operations were performed, however, as in the previous year and their nature showed little change.

The Neurosurgical Service is fortunate in that it is not scheduled for an eventual shift into the new building. The staff therefore has been spared the burden of detailed planning which has occupied so much of the time and energies of other services. Like others, however, the Neurosurgical Service can look forward eagerly to the new operating facilities which will accrue to them when the new building is completed. Wonderful work has always been done in the old operating suites, bold and imaginative procedures gave hope of happy normal life to many who previously had been regarded as hopelessly crippled. But the Service can anticipate the passing of these facilities without regret.

## STAFF

Except for the usual new appointments in the House Staff and the Laboratory during the past year, the personnel of the Neurosurgical Service has remained the same.

## RESEARCH

Investigative work has been in three general areas.

(1) The effect of gamma radiation on the central nervous system.
(2) Studies on hydrocephalus and the cerebrospinal fluid.
(3) Studies on the use of new plastic materials.

All of these projects have been supported by grants-in-aid from the Public Health Service.

### *Studies on the Effects of Gamma Radiation*

In the study of the effects of gamma radiation a series of experiments on the spinal cord were completed and reported at several

medical meetings. These studies have confirmed the damage to the vascular supply as being paramount in the acute injury, but have suggested that this may not be the entire cause of late effects, as has been thought. Studies on the electro-physiological changes in the spinal cord suggested different effects on the spontaneous electrical activity and the conduction systems. This will be the basis of later investigations.

A large group of subjects has been irradiated with $Ta^{182}$ implants and are being watched for late effects. In carrying out these experiments a large body of information on the normal EEG has been acquired and is to be published.

*Studies on Hydrocephalus and the Cerebrospinal Fluid and its Pathways*

The species variation of the cerebrospinal fluid pathways was conclusively demonstrated for animals by the use of radio-opaque materials in the subarachnoid space. This work is especially important as it points out the unsuitable nature of certain subjects for work involving CSF absorption. In addition this work demonstrated the production of hydrocephalus as a result of chemical meningitis. This is important as a research tool for the experimental production of hydrocephalus as well as for adding to the knowledge of the pathogenesis of communicating hydrocephalus. This study also provided an interesting study of cavitation of the spinal cord which resulted from vascular occlusions caused by the meningitis. At present this material is being prepared for publication. Studies on the ionic exchanges of the CSF have been continued using $Na^{24}$, $K^{42}$ and $I^{131}$ tagged albumen. These studies have been carried out in hydrocephalic animals before and after choroid plexectomy. The results of these experiments are complex and have not yet been completely evaluated.

*The Study of Plastic Materials in Surgery*

Strengthening the walls of arteries by spraying them with plastic solutions was tried. This resulted in considerable thickening of the adventitia of the artery without affecting the intima or media. This effect was shown to be caused by the solvent and not the plastic, as it could be produced by acetone alone. Studies of changes in bursting pressure have been done. The possible use of purified trypsin in the subarachnoid space for the dissolution and prevention of adhesions has been extensively studied. The intravenous route seems impractical as only low levels of trypsin could be detected in the CSF with toxic intravenous doses. Direct intrathecal and intraventricular use proved unsuccessful because of the production of subarachnoid hemorrhage presumably resulting from altered capillary permeability with even low concentrations. Cisternal drip of trypsin at low concentration failed to

produce an effective level of trypsin, and in monkeys such a drip caused EEG changes with quadraplegia and death in status epilepticus. It was concluded that trypsin probably could not be used as a lytic agent in the subarachnoid space.

"Cocoon," a plastic protective material, was found and tried as a surgical dressing material. In some instances this proved to be very satisfactory. Aeroplast, another commercial plastic dressing material, was also tried and found to be satisfactory. No histological studies were done with these materials as surface dressings, but they were used on all operative wounds and the effects noted.

## 1953

## NEUROSURGICAL DRESSINGS

### The Children's Hospital

| | |
|---|---|
| Admissions | 475 |
| Congenital Anomalies | 208 |
| Infections | 28 |
| Brain Tumors | 51 |
| Spinal Tumors | 4 |
| Trauma | 111 |
| Miscellaneous | 73 |
| TOTAL | 475 |
| Private | 85 |
| Staff | 390 |
| TOTAL | 475 |

| | |
|---|---|
| OPD Visits | 1347 |
| Aver. pts. per clinic | 26.9 |

| | |
|---|---|
| Operations | 442 |
| Cranial | 310 |
| Spinal | 54 |
| Miscellaneous | 78 |
| TOTAL | 442 |
| Total Operations | 442 |
| Excluding: | |
| Pneumoencephalograms | 25 |
| Ventriculograms | 14 |
| Myelograms | 27 |
| | 66 |
| TOTAL | 376 |

| | |
|---|---|
| Pneumoencephalograms | 25 |
| Ventriculograms | 14 |
| Myelograms | 27 |
| Burr Holes | 32 |
| Craniotomies | 73 |
| Post Fossa Explorations | 38 |
| Dermoid Cysts: | |
| Intracranial | 1 |
| Cranial | 9 |
| Spinal | 2 |
| Angiograms | 19 |
| Laminectomies | 9 |
| Cranioplasties | 1 |
| Craniectomies | 29 |
| Matson Procedures | 16 |
| Meningoceles | 27 |
| Encephaloceles | 7 |
| Skull Fractures | 19 |
| Torkildsen Procedures | 0 |
| Discs | 1 |

MISCELLANEOUS OPERATIONS

| | |
|---|---|
| Excision of other Scalp Tumors | 6 |
| Excision of Tumors of Skull | 4 |
| Excision of Mass in Neck | 1 |
| Excision of Lipoma of Back | 1 |
| Angiogram and Pneumoencephalogram | 3 |
| Ventriculogram and Pneumoencephalogram | 2 |
| Subtemporal Decompression | 3 |
| Enucleation of Eye | 1 |
| Hypoglossal Facial Anastomosis | 1 |
| Lumbar Puncture under anesthesia | 1 |
| Exposure for Cervical Spinal Fusion | 1 |
| Application of Skeletal Traction | 2 |
| Plastic Repair of Scalp | 1 |
| Repair of Skull and Dural Defect | 1 |
| Attempted Post Fossa Exploration | 1 |
| Revision of Craniotomies | 4 |
| Removal of Tantalum Plate | 1 |
| Subarachnoid-Peritoneal Shunt | 7 |
| Subdural-Peritoneal Shunt | 1 |
| Ventriculo-Peritoneal Shunt | 14 |
| Ventriculo-Ureteral Shunt | 2 |
| Ventriculo-Extradural Shunt | 1 |
| Revision of Shunts | 34 |

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REPORT OF THE DIVISION OF

# Laboratories and Research

*For the year ending September 30, 1953*

SIDNEY FARBER, M.D., *Chairman*

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## INTRODUCTION

The Division of Laboratories and Research was established on July 1, 1946 following a careful study of the needs of the Children's Medical Center and an evaluation of the opportunities of the hospital as a whole for the greatest possible contribution to Pediatrics. The scope and the purposes of the Division of Laboratories and Research may be described in terms of the utilization of techniques of biology, chemistry

and physics applied to the disciplines of immunology, experimental pathology, pharmacodynamics and physiology for the solution of mental and physical problems concerned with the normal and the sick infant, child, and adolescent. The Division, therefore, takes part in fulfilling the other major functions of The Children's Medical Center. These include education of medical students, doctors, nurses, physiotherapists, occupational therapists, social service workers, parents and public, and all of the activities concerned with care and treatment carried out by the several divisions and departments for the achievement of the goal of the Children's Medical Center which is the *total care of the young.*

This Division includes all research activities except those forming integral parts of the several clinical departments; it includes all routine laboratory departments. The facilities, techniques, and knowledge of the experts in the basic sciences in this Division are available to the entire Children's Medical Center by means of free interchange and cooperation in research ventures.

The hopes expressed when the Division was established have been realized. New financial support has been attracted from many public and private sources. The reorganization of the Clinical Laboratories alone has added a sizeable amount to the hospital income. One outgrowth of the organization of this new Division was the acceleration of research activity in the chemotherapy of cancer, the results of which gave scientific justification and stimulation for the creation of the Children's Cancer Research Foundation.

We are happy to report today that there exists in effect the *Institute of Pediatric Research* which was one of the major goals outlined by J. W. Farley in 1946 in the announcement of plans for the Children's Medical Center.

## Laboratories of Nutritional Research

Organized for and directed by Dr. S. Burt Wolbach, Shattuck Professor Emeritus, Harvard Medical School and Pathologist-in-Chief at the Children's Hospital from 1915 until his retirement in 1947, this unit is world renowned for its research in the pathology of vitamin deficiency states. Assisted by Dr. Charlotte Maddock, and in part by Dr. Jonathan Cohen, Dr. Wolbach has continued in 1952–53 his 30-year program of fundamental contributions to this field, and gave his talent and research experience to participation and leadership in a fundamental attack on one of the greatest unsolved problems in medicine – the nature of muscular dystrophy.

On March 19, 1954 the Children's Hospital and the Medical Center suffered an irreparable loss in the death of Dr. S. Burt Wolbach. For almost 40 years he had given himself to the Department of Pathology

and latterly to the Division of Laboratories and Research with devotion, wisdom and profound scholarship. He was an inspiration to all in the Children's Hospital family who had the privilege of association with him.

## Laboratories of Infectious Disease

Dr. John F. Enders is the first chief of this division. With a series of associates, including Dr. Thomas H. Weller and Dr. Frederick C. Robbins, now Professor of Pediatrics at Western Reserve University, Dr. Enders has made fundamental contributions in several fields of infectious disease and notably in poliomyelitis. In the November, 1952 issue of the *Scientific American*, Professor Melnick of Yale University in his article "A New Era in Poliomyelitis Research" wrote "the discovery of a way to grow poliomyelitis virus in tissue culture made three years ago by John F. Enders, Thomas H. Weller, and Frederick C. Robbins at the Children's Hospital in Boston — has given a tremendous impetus to the study of this disease. It means the end of the 'monkey era' in poliomyelitis research and opens the way to a much wider attack on the problem." The work of Dr. Enders and his colleagues specifically has made possible the rapid identification of the kind of poliomyelitis in a given case and has paved the way for the making of what we hope will be a successful vaccine for the prevention of poliomyelitis. Their achievement represents also an economic triumph which will accelerate research progress since one small flask containing virus grown on tissue culture acts as a substitute for one monkey.

This is a long term program, one part of which led to the discovery that the virus of poliomyelitis could be grown in tissue culture in amounts to make practical the important step of manufacture of a vaccine. This is now going on in other laboratories and human trials are actually under way.

The general outline of a long-time program of the study of various aspects of poliomyelitis viruses has been continued. This includes such aspects as (1) attempts to diminish or abolish the virulence of various strains of virus for the experimental animal by cultivation under appropriate conditions *in vitro,* (2) the refinement of methods for the isolation and typing of poliomyelitis viruses from materials derived from patients with the disease, (3) experiments to determine the most suitable techniques for assaying the content of virus neutralizing antibodies in serum from patients and in gamma globulin, (4) the determination of antibodies against the three prototype strains for virus in sera of young children collected in Africa in order to define the incidence of infection of poliomyelitis viruses under the conditions found in that region. This forms part of a cooperative study with Dr. James Gear of

the South African Institute for Medical Research, (5) attempts to develop a tissue culture line of normal human embryonic cells which may be maintained indefinitely in the laboratory and serve as a source of standard cultures for further work in poliomyelitis and other viruses of human origin, (6) further exploration of the complement fixation technique as applied to the detection of poliomyelitis antibody.

Other studies concerning the problem of causation of one form of stomatitis of importance to dentists has been carried out. Evidence suggests an etiologic relationship between this disease and the herpes virus. Dr. Enders' Department is able to report the virus of herpes simplex zoster and varicella have been successfully maintained in serial passages in cultures of certain human tissues. Of great promise are the studies concerning the propagation in cultures of human tissues of the virus of German measles and ordinary measles.

These laboratories have as visiting research workers men from South Africa, Vanderbilt University, Mexico and Pittsburgh.

During this past year Dr. Enders was honored by the Board of Trustees of the Children's Medical Center. He received the Passano Award for 1953, the honorary degree of Doctor of Sciences from Yale University and was elected a member of the National Academy of Sciences.

Dr. Thomas H. Weller, and Dr. Frederick C. Robbins, formerly a member of this laboratory, were co-recipients of the first Mead Johnson award for 1953 for their part in the research which made possible the vaccine for poliomyelitis.

The clinical divisions of the Children's Medical Center receive constant assistance in the solution of perplexing problems of infectious disease on the wards from Dr. Enders and his staff. The entire cost of this division is borne by outside funds, the largest single block of which has come from the National Foundation for Infantile Paralysis ($54,000 for the year 1953).

## Department of Pathology

This department is the pioneer in its field. The most important laboratories in this country, Europe and Latin America which have been organized within the last few years in this recently developed field are headed by men who have received part or all of their training here. In addition to doctors from many parts of this country now receiving training here, Mexico, Haiti, Germany, Belgium, England, Canada, Syria have been represented during the past two years. Much of the support of the personnel of the department comes from outside sources which make possible the appointment of men and women of superior training and experience, since they are responsible for both routine and research programs.

The large volume of work mentioned in previous reports continues (80–100% more than 10 years ago). The records in this department have been invaluable to members of the clinical staffs for the writing of papers and books. They are carefully typed, illustrated, indexed and bound and form a unique foundation to one whole segment of research and care in the field of pediatrics and the various specialties related to pediatrics. It is a firm commitment of this department to maintain the high standards of the past 26 years and to encourage the open door policy in teaching and in the use of its experience.

Dr. Benjamin Landing resigned September 1, 1953 to become Pathologist to the Cincinnati Children's Research Foundation and Hospital. His record here was one which brought pride to all with whom he worked. His appointment to the Cincinnati Hospital followed many consultations with Dr. Ashley Weech, the Director of that Hospital, who over a period of years has consulted Dr. Farber on the organization of a department to be modelled after the one here.

Active responsibility for the routine work in the Departments of Pathology is in the hands of Dr. John Craig. His own research includes studies on galactose, disseminated mycosis, the pathologic aspect of A-gammaglobunemia, cirrhosis of the liver, and lupus. Numerous other studies under way will achieve completion and publication in the near future.

Dr. J. Lewis Bremer recently celebrated his 79th birthday. He continues to be an inspiration to the younger members of the Department of Pathology who are waiting completion of his book on the Embryologic Basis of Malformations with great eagerness.

Dr. J. LeRoy Conel has completed the fifth volume of his monumental work on the Development of the Brain in Infancy and Childhood. Complete support for this project was obtained through the United States Public Health Service.

Dr. Jonathan Cohen, a member of the Orthopedic Service, is Associate Pathologist (orthopedic). Dr. Cohen's research is unique in orthopedic surgery today in the breadth of planning and the multiplicity of techniques from various disciplines which are employed.

Dr. Paul Yakovlev of Harvard Medical School and the State Department of Post Graduate education has been consultant in neuropathology for the past two years with support from the United Cerebral Palsy Association for his basic work concerning the pathology of that disorder. His assistance and advice have been invaluable in the conduct of the routine work of the Department of Pathology.

Dr. Alwin Pappenheimer has just celebrated his 75th birthday. He is Professor of Pathology, Emeritus, of Columbia University Medical School and has given invaluable consultation and advice to the younger members of the Department for the past several years. He

has worked also in collaboration with Dr. Enders and his department.

The department acknowledges the constant inspiration, guidance, and assistance from Dr. S. Burt Wolbach who gave unselfishly of his time and unparalleled experience to his younger colleagues.

## Clinical Laboratories

Since 1946 Dr. Harry Shwachman has been chief. All routine laboratory studies in the entire institution – about 100,000 per year – are made under his direction with the aid of medical associates and technicians. When organized by the Chairman of the Division of Laboratories and Research in 1946 a system of charges fair to the patient and to the institution was made up. This income has proved to be one of the great single blocks of new money added to the resources of the Children's Medical Center during the past few years. In addition to routine work and the training of house staff, Dr. Shwachman participates in numerous clinical exercises. He is chief of the Nutrition Clinic and is responsible for an important research program in the field of pancreatic insufficiency (mucoviscidosis). He is also one of the chief clinical consultants to the tumor therapy group and an active member of the medical visiting and teaching staff.

Dr. Shwachman has been extremely active in giving lectures on the various research aspects of his Departmental activities. The routine of his department has been carried out on a level not exceeded in my experience. There is no part of the hospital more vital to the conduct of the activities of the Medical Center as a whole than the Clinical Laboratories.

## The Children's Cancer Research Foundation

The Children's Cancer Research Foundation was organized in 1948 as a logical development of the cancer research program carried on for many years in the Department of Pathology of the Children's Hospital and the Tumor Therapy Division. With the strong encouragement of Mr. J. W. Farley and the Board of Trustees of the Children's Hospital, the Variety Club of New England joined with numerous organizations and individuals throughout New England, including the Boston Braves and later the Red Sox, the motion picture industry and representatives of the press, radio, television to form a permanent foundation for research concerning the nature, the treatment and hopefully the cure of cancer in children. Through their organization the Jimmy Fund, the children of New England and their parents have written a unique chapter in the history of medical philanthropy.

On January 7, 1952 the beautifully equipped Jimmy Fund building was dedicated. It was built at a cost of one million five hundred thou-

sand dollars of which $100,000 for equipment represented a grant to the scientific director of the Children's Cancer Research Foundation, from the National Cancer Institute. The beautiful first floor clinic has made possible a new kind of care of sick children in an environment created for its purpose. The four floors of research laboratories are equipped with the specialized apparatus required by experts in the fields of physics, chemistry, biology and experimental pathology. The handsome, comfortable and efficient auditorium of the Jimmy Fund Building is used for all teaching exercises of the Children's Medical Center as well as many of the important lectures given by the Harvard Medical School, the School of Public Health, the surrounding hospitals and many medical organizations in New England.

For the purposes of this publication only a short summary of some of the activities of the Children's Cancer Research Foundation will be mentioned. A publication concerning the detailed description of the foundation's activities will appear separaterly from the Foundation.

The Division 34, Tumor Ward, is supported in part by a special grant for research beds to the Director of Research from the National Cancer Institute. During the past few years more than $200,000 has been made available for this purpose. Continuation at the rate of $50,000 for the next three years has just been granted.

*The Clinic of the Children's Cancer Research Foundation.* More than 200 patients with acute leukemia or other forms of disseminated cancer receive what is called *total care* in the first floor clinic of the Jimmy Fund Building, or in the 20 beds allotted to the Foundation by the Children's Hospital on Division 34. Since organization of this clinic, January 1, 1947 more than 1300 patients have received chemotherapy as part of their total care. 500 of these have been children with acute leukemia. This is the pioneer endeavor of its kind in the world. The first breakthrough into the chemotherapy of cancer incurable by other methods was made in this clinic and its attached research laboratories in 1947.

A large number of devoted doctors, nurses, technicians, social service workers and others have participated in this clinical effort. Senior members of the medical group over the period of the last several years, who have served for a period longer than one year, include Dr. Virginia Downing, Dr. Rudolf Toch, Dr. James P. King and Dr. Ruth Appleton. Doctors from all over the world have spent time in this Clinic studying the methods employed here for the use of chemical and other agents as part of the *total care* of children with disseminated cancer.

*Laboratories of Organic Chemistry,* under Dr. Edward J. Modest. A large program of synthesis of new chemical compounds hopefully of value against many forms of incurable cancer has been carried out since 1947. More than 100 of these have been made in these labora-

tories. Some of these now undergoing study, as part of the treatment of our patients, are active in animal studies against leukemia, melanoma, and several other forms of cancer. More than 20 of these are also active antimalarial agents.

*Genetics of Leukemia and other forms of cancer.* Dr. A. G. Steinberg an authority in the field of genetics spends part of his time in a study of the possible hereditary factors of cancer in children. The remainder of his time is spent in a study of genetic factors in blood with Dr. Louis K. Diamond.

*Laboratory of Enzyme Chemistry,* under Dr. Zelma Miller, has made important progress concerning the mechanism of action of chemical compounds used in cancer.

*Laboratories of Biophysical Chemistry.* These are still under the part time direction of Dr. Elkan Blout. His fundamental studies on the nature of proteins in this pioneer laboratory which he has created for the use of infra-red microscopy and spectrophotometry have been productive of much important knowledge. He has developed techniques which permit the interpretation of the structure of an organic compound from samples less than one millionth of one gram in weight.

*Laboratories of Polypeptide Chemistry,* under the direction of Dr. Elkan Blout. A group of chemists, including Dr. R. H. Karlson, and Dr. J. G. Gunnerson, have carried out successfully after several years of work research at the request of the United States Army concerning the synthesis of plasma extender. This is to be used, if successful, as artificial substitute for blood plasma.

Our concern here would be with the use of this material to take the place of blood in children with acute leukemia. The investigation of Dr. Blout and his colleagues has given for the first time a water soluble polypeptide in the proper molecular weight range for its stated purpose. Biological studies are now under way before use in human beings.

*Laboratories of Microbiology.* Mr. George Foley and Dr. David Winter are carrying on one of the most carefully conducted and broadly conceived microbiological studies in the field of cancer chemotherapy. These laboratories have been responsible for the discovery of biological activity of great importance in chemical compounds we are now employing in patients.

The range of interest of this group includes search for chemical agents against infectious disease which can not be treated successfully today, such as toxoplasmosis.

*Laboratories of Transplanted Tumors of Mice and Rats and in Hamsters.* During 1943 eight new carcinolytic agents which are having an important effect upon leukemia in the mouse were discovered. Our finding in 1952 of the action of a chemical compound on malignant melanoma, hitherto unaffected by any forms of treatment has been

followed by a large program of mouse melanoma research. This has yielded evidence of at least six of the chemical compounds which have come from our research program having an effect upon the tumor in the mouse. These studies will be carried to man as rapidly as possible. Dr. Handler and Dr. Yerganian have worked with the growth of the human tumor in the cheek pouch of the hamster. Dr. Handler recently has been able to grow the human lymphoma in the hamster for the first time. The ultimate hope of this work is to have human cancer available in large amounts in the experimental animal for the study of the action of chemical compounds on cancer.

*Laboratory of Tissue Ultrastructure Electronmicroscopy.* Dr. Betty Ben Geren continuing her program and in collaboration with the Biology Division of Mass. Institute of Technology has made important contributions to the structure of the myelin sheath. This research eventually will have importance to neurological disorders, such as cerebral palsy, and to our understanding of brain tumors. A fundamental approach to the finer structure of the sheaths of nerve fibers has been made with the study of the structure of the chemical materials in this nerve center. With magnifications up to 300,000 times Dr. Geren has produced photographs of interest to research workers in this field.

*Laboratory of Bone Marrow Physiology.* Dr. Edward Thomas has taken over this work to the laboratories of the Peter Bent Brigham Hospital for this year, although it still is a part of our research program. He will return next year.

*Laboratory of White Cell Physiology.* Dr. Edmund Klein, National Research Council fellow and Dr. Sandro Eridani of Italy have completed a program concerning the biology of the white cell under normal conditions and in leukemia.

*Laboratory concerned with Massive Hemorrhage in Leukemia.* With Dr. Gustave Freeman's continued support on a part time basis and the active assistance of Dr. Klein and Dr. Toch we have made important progress in the last few months in the demonstration of a material in frozen platelets which is responsible for rapid stoppage of massive bleeding under certain conditions in acute leukemia.

*Laboratory of Bone Marrow Pathology.* Dr. Virginia Downing has assumed the direction of this laboratory for the past several years in addition to her other duties with the clinical chemotherapy program. She has assembled the greatest experience in the world today with the bone marrows of leukemic children. From her studies new classifications of the leukemias will appear.

*Laboratory of Chemical Pathology.* Dr. L. Lahut Uzman, who has just left for a term in the Army has been responsible during the past several years since this department was organized for him, for basic contributions in a number of fields of chemical pathology. He has eluci-

dated the nature of the basic defect in Gaucher's disease and in several related disorders of the lipo-protein metabolism. His fundamental studies concerning the nature of the metabolic defect in other familial "degenerative" conditions has provided a hopeful note in what has been an hopeless area. A detailed summary of Dr. Uzman's contribution will be found in the forthcoming Foundation report.

*Laboratory of Histochemistry.* The histochemistry laboratories have been taken over by Dr. John Craig on the departure of Dr. Landing. This has been a valuable development in the field of microscopic chemistry of cancer and lipid-metabolic disorders.

*Metabolic Disorders related to Cancer.* Certain of these under study for many years in the Department of Pathology by Dr. Farber have been studied more intensively with the assistance of Dr. Allan Crocker. Particular attention has been paid to chemical problems concerned with these lipo-protein metabolic disorders. A vigorous therapeutic attack with the aid of materials derived from the cancer chemotherapy program has been responsible for measurable progress.

*General Remarks*

The resources of the Children's Cancer Research Foundation and the Division of Laboratories and Research have been used extensively by the research divisions of the several clinical departments of the Children's Hospital and the Children's Medical Center. The staff has contributed on numerous occasions to the solution of problems presented by individual patients. Whenever possible collaboration with research workers in other parts of the Children's Medical Center has been achieved.

The members of the Division of Laboratories and Research and the Children's Cancer Research Foundation staff have been active in the reading of papers at scientific gatherings, medical societies and other medical schools. The laboratories have played host to visiting scientists and medical men from many parts of the world.

Department activities include membership on the National Advisory Cancer Council and appearance in behalf of cancer research in the country before the House and Senate Appropriations Committees, Consultantship to the National Cancer Institute, the Armed Forces Institute of Pathology, and to several of the large cancer institutes of the country, and Chairmanship of the Research Advisory Board of the United Cerebral Palsy Foundation.

The Committee for the Planning and Development of the Children's Medical Center has been responsible for the successful launching of a large program of clinical and laboratory programs in the field of cerebral palsy at the Children's Medical Center. A similar program

in the field of muscular dystrophy has been in the planning stage for more than three years. Certain portions of this program have been begun. Large grants of new monies support these ventures.

On September 1st, Mr. Frank Schmehl of the United States Public Health Service was appointed to the newly created position of Executive Officer of the Children's Cancer Research Foundation.

On January 1st, 1954 Dr. Jacob Furth, at one time Professor of Pathology, Cornell University Medical School, and until January 1st Chief of Laboratory of Pathology and Physiology, Biology Laboratory, Oak Ridge National Laboratory, will join the Foundation staff as Associate Director of Research. He is a recognized leader in experimental pathology.

Gratitude is expressed for the loyal and effective work of all members of the Division of Laboratories and Research and the Children's Cancer Research Foundation. The happy cooperation of the staff of the entire Children's Medical Center, under the leadership of the Chiefs of Staff has made possible much that has been recorded here.

Grateful acknowledgment is expressed to all of the numerous unseen as well as visible members of the Children's Hospital and Medical Center family whose contribution is impossible properly to describe. Particular mention must be made of our indebtedness to Miss Muriel Vesey, Director of the School of Nursing and to her staff, including Miss Louise Fandel, head nurse on Division 34, and Miss Nancy Harrison and Miss Beverly Hodsdon, chief nurses in the Clinic. A new chapter in nursing history has been written by the dedicated people under Miss Vesey's supervision.

Attention is called once more to the vision and courage of Mr. J. W. Farley, Mr. P. D. Howe and the other officers, trustees and members of the Children's Hospital and Children's Medical Center without whose initial and sustained support these developments would have been impossible. It is a pleasure to speak of the generosity and devotion of all of those responsible for the Jimmy Fund and the Children's Cancer Research Foundation. Under the leadership of Mr. Martin J. Mullin, President of the Children's Cancer Research Foundation, Mr. Arthur Lockwood, Chairman of its Executive Committee of the Board of Trustees, and Mr. William Koster, Executive Director of the Jimmy Fund and a Trustee of the Foundation, and their fellow officers and trustees, a new and unsuspected source of community support has been uncovered. These new friends in addition to assisting the Children's Medical Center as a whole, have with unprecedented vigor and courage created something of their own. Special mention should be made of the devoted assistance and cooperation of Mrs. Christine McGachie and Mr. John Carabitses.

REPORT OF THE DEPARTMENT OF

# Radiology

*For the year ending September 30, 1953*

E. B. D. Neuhauser, M.D., *Radiologist-in-Chief*

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During the past year the Department of Radiology has continued to function at somewhat more than a reasonable capacity, but fortunately there has been no notable increase in the number of patients examined, but during the past two years the work of the department has become more diffuse. Because of this it has been necessary to add to the full time staff of the department. On July 1, 1953, Dr. Herbert Peterson returned to the Children's Hospital as Assistant Radiologist after completion of his training at the Peter Bent Brigham Hospital. Doctor Peterson has taken on as his chief responsibility supervision of the work at the Boston Lying-In Hospital, the Wellesley Convalescent Home and Hospital and the X-ray Unit in the Jimmy Fund Building.

It has become quite clear that the maintenance of small outlying X-ray units, such as are present at Wellesley and in the Jimmy Fund Building, although they may be necessary at this time, are uneconomic to operate both in time and in expense. Neither of these small departments has the capacity to maintain an adequate work load to compensate the hospital reasonably for the technical coverage that must be provided.

With the move into the new department all roentgenologic activity, with the exception of Wellesley, will be carried out in one area. We trust that more satisfactory service can thus be rendered not only to the Children's Hospital but to the Medical Center as a whole.

In addition to the routine responsibilities of the department the radiologists have continued in their belief that one of their prime responsibilities is the diffusion of knowledge. Approximately eighteen graduate students have spent varying periods in the department and residents in training have been received from the Massachusetts General Hospital, Boston City Hospital, Massachusetts Memorial Hospitals, Lahey Clinic and the hospitals of the Veteran's Administration. More than thirty out of town lectures have been given in the past year involving more than 30,000 miles of travel.

Residents and students of previous years now hold responsible positions in well known pediatric institutions. Our resident of 1950–1951, Dr. Carroll Berman, is now Pediatric Radiologist to the Floating Hospital of Boston, and Dr. Harvey Humphrey, our resident of the year 1951–1952, is Radiologist at the Los Angeles Children's Hospital.

Another and most important obligation has been assumed during the last year, namely, planning the new X-ray Department, which will be housed on the second floor of the new building which was begun during the Fall. This has proved time consuming and occasionally frustrating, although inevitable and obviously necessary.

Dr. Martin H. Wittenborg, Radiologist to the Children's Hospital, has been relieved when necessary of routine responsibilities to be free to devote himself to planning in cooperation with the equipment manufacturers' planners and with Stone and Webster. He will continue to be available until plans have matured, by which time we will have an efficient layout adequate for the smooth running of the department.

There have been a few important changes in technical staff of the department during the past year.

During the past year a training school for X-ray technicians has been established in cooperation with the Peter Bent Brigham Hospital and the Boston Lying-In Hospital. A new student is received every three months at The Children's Hospital after having completed nine months of training at the Peter Bent Brigham.

Each year a number of scientific articles are published from the department or in cooperation with other services. The department was honored by receiving in one year a Mead-Johnson Award for research in pediatrics and the Caldwell Gold Medal of the American Roentgen Ray Society.

On the whole this has been a busy and we believe profitable year. Our hardships of noise, overcrowding and confusion have long been with us, but they are becoming more bearable with the opportunity to plan for our new department and in the knowledge that construction of the new building has actually begun.

REPORT OF THE

# Nursing Service

*For the year ending September 30, 1953*

Miss M. B. Vesey, *Director*

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In 1952–53, nearly ten thousand patients were admitted to the divisions in which the service bears responsibility for nursing care and more than seventy thousand patients were seen in out-patient. Granting many deviations from the ideal in the care rendered to individuals, the staff may yet derive considerable satisfaction from the part it has played in the treatment of these children.

The out-patient figures deserve comment. They show an increase over preceding years in part due to improved record keeping, but acquaintance with the facts demonstrates the increasing need for nurses and clerical persons in this department. Of the total number of visits, 7,953, or a monthly average of 633, were seen in the general emergency clinic, most of whom came in after regular clinic hours. More patients are treated there on an emergency basis than are scheduled for the day clinic of whom about one-third are admitted to the hospital. Figures for earlier years are not available but there can be no doubt that the increase is considerable.

Patients remain longer in the emergency clinic than formerly since many procedures are undertaken there which used to require admission. The supporting services of record room, out-patient and in-patient admitting departments and cashier are not available at most of these times, and much of this work necessarily devolves upon nursing.

Early in September the nursing staff was placed on a forty-hour week with a decrease of four hours for all full time personnel. This results in a need for twenty more employees if the total hours lost are to be fully replaced. When the change was first made it was anticipated that it would not be possible to make this replacement, first because the workers might not be available and secondly because of the cost. It was recognized that difficulties would result from the change but it was felt essential to put into effect the shorter work week in order to meet standards which are rapidly becoming universal.

At the end of the fiscal year 1953 the nursing staff included the following numbers of persons as compared with the same date in 1952:

| | *1953* | *1952* |
|---|---|---|
| Graduate Nurses | 127½ | 118½ |
| Licensed Practical Nurses | 2 | 2 |
| Clerks | 14 | 12½ |
| Hospital Aides | 16 | 20 |
| Division Helpers | 36 | 30 |
| Orderlies | 7 | 8 |
| Private Duty Nurses | 16 | 8 |

(Some of the persons listed above are part time workers.)

During the year eighty-one professional and practical nurses were taken on and sixty-seven left the staff. Although these are very sizeable numbers it is also true that many persons were employed on a temporary basis and some of them would be counted in both figures. Of those currently on the staff seventy-five have been with the institution for more than one year. The rate of turnover in the professional staff has slowed somewhat in the past two years. The figure was 65.2% in 1951 and for the year just ended, 55.6%. Although comparable figures are not available for the subsidiary groups there is evidence that it is increasingly difficult to find employees to fill these positions.

In February 1953 a staff of evening supervisors was added, the night staff being reduced from four to three in order to make this possible. The supervision of patients during these hours has been improved by this change and the antiquated twelve hour night duty for certain staff members has been eliminated.

The study project undertaken by the Nursing Council of Greater Boston of the functions of staff nurses has continued through the year and has grown in its objectives. As part of the whole project an institute was provided for hospital representatives on methods of work simplification.

Many changes indicated in the nursing service tend to be set aside for the moment in order that planning for the new building may go forward. Many of the difficulties with which the nursing service is now faced should become less critical when the physical facilities are improved. Such matters as the centralization of equipment and supplies, transportation of patients, supervision, and so on will be immeasurably improved in the new building.

A number of individuals whose services were highly valued left the staff during the year. We are grateful to them for their contribution as we are to the members of the present staff who so willingly expend their efforts for the benefit of patients and the institution as a whole.

REPORT OF THE

# School of Nursing

*For the year ending September 30, 1953*

Miss M. B. Vesey, *Director*

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A class of students numbering forty-six was admitted to the school in September 1953. This exceptionally large class is the result of the decision to discontinue taking a group into the school in January, the deficit being made up by taking more students in the fall. There were 149 students in the school at the end of the year as compared with 142 at the close of 1952. Also in 1953 nine students were admitted in January, making a total of fifty-five for the year.

States represented in this student body are:

| | |
|---|---|
| Massachusetts | 35 |
| New York | 3 |
| Maine | 5 |
| Maryland | 1 |
| New Jersey | 2 |
| Pennsylvania | 2 |
| Rhode Island | 3 |
| New Hampshire | 4 |

Nine students out of the group had spent one or more years in college.

There were eight withdrawals during the year but three of the students plan to return at a future date to complete the course.

A class of forty graduated from the school on June the 4th, 1953. Dr. Claude M. Fuess, Headmaster Emeritus, Phillips Academy, Andover and Chairman of the School of Nursing Committee, spoke to the group. A number of these young women are working in other institutions but seventeen are employed at the Children's Hospital, five are married and not working, and one has returned to college.

The withdrawal rate for this class was 8.5%, — less than normal for us and well below the national average which runs about 30%.

A total of 548 affiliated students from 18 different hospital and college nursing schools completed the course.

It is a pleasure to report that there have been relatively few changes in the faculty of the school.

The school was visited in the spring by a representative of the Accrediting Service of the National League for Nursing for review of the program. The visit was a pleasant one and faculty members, although they found the preparation of materials for this visit extremely time-consuming, undoubtedly profited greatly by the review.

The school became a member of the National League for Nursing in June.

A good deal of attention has been given to the clinical instruction program, particularly in relation to written records. Though much material is in satisfactory form, more remains to be done. The Children's Hospital students' records show evidence that they are getting more clinical instruction in spite of the difficulty in finding persons to participate and of suitable subjects because of the rapid turnover of patients.

Night duty experience was reduced by two weeks in the three year program as students are no longer assigned to night duty at McLean Hospital.

The resignation of Miss Staub and the consequent hiatus in the play programs has an unfortunate effect on the instruction of students. In recent years the students' understanding of the behavior of young children has been broadened by the interpretation which Miss Staub gave so effectively.

Three scholarships were awarded by the Alumnae Association and one by the Medical Associates.

Recruitment for the school seems not to be a problem at the present time. The entering class of forty-six admitted in September 1953 was selected from 285 applicants.

The school faculty is appreciative of the support and interest of many groups, notably the School of Nursing Committee, the Women's Committee, the medical and nursing staffs, administration and the Board of Trustees.

## STUDENTS AND STAFF

| | | | | |
|---|---|---|---|---|
| C. H. Students enrolled, October 1, 1952 | | | 143 | |
| Admissions | | | 55 | 198 |
| Completed course during year | | 41 | | |
| Removed from roll | | | | |
| 1st year | 3 | | | |
| 2nd year | 3 | | | |
| 3rd year | 8 | 8 | | 49 |
| C. H. Students enrolled, September 30, 1953 | | | | 149 |
| Student Nurse Enrollment, September 30, 1953 | | | | |
| C. H. Students Enrolled | | | 149 | |
| Affiliating Students Enrolled | | | 140 | 289 |
| C. H. Students on Affiliation, not in residence | | | 42 | |
| C. H. Students in Residence but Attending Simmons College Preclinical Course | | | 46 | |
| C. H. Students on Vacation | | | 12 | 100 |
| | | | | 189 |
| Total Number of Students Assigned to Division and Special Departments | | | | |
| Children's Hospital | | | 161 | |
| Infants' Hospital | | | 28 | 189 |

| Graduate Staff, September 30, 1953 | |
|---|---|
| Director | 1 |
| Assistants | 5 |
| Instructors | 7 |
| Night Supervisors | 2 |
| Evening Supervisors | 3 |
| Day Supervisors | 6 |
| Head Nurses | 17 |
| Asst. Head Nurses | 5 |
| General Staff Nurses | 33 (full time) |
| Operating Room Staff | 12½ |
| Out-Patient Department | 11 (including Child Health Unit and Adolescent Unit) |
| Infants' Hospital | 12 (full time) |
| | 114½ |
| Staff nurses part time | 13 |

# Infants' Hospital

*The Infants' Hospital was established in 1881 as a development of the old West End Nursery and Hospital. It was located alongside the old Children's at the corner of Huntington Avenue and what is now Gainsborough Street. When the Children's moved in 1914 to Longwood Avenue, the Infants' moved too, to the building on Shattuck Street now occupied by the Harvard School of Public Health. In 1920 the Infants' Hospital occupied a new building within the site of the Children's Hospital. In 1923 the two hospitals began to function as a single unit.*

## Report *for the year ending September 30, 1953*

CHARLES A. JANEWAY, M.D., *Physician in Chief*

The Infants' Hospital, once the most hectic part of our medical service, has now become one of its calmest portions. This is due to the excellent team of nurses under Miss Beardwood's supervision — Miss Berg, Miss Barnes, Miss Brown, and Miss Camelio — whose steady influence has made it a very smoothly operating unit, where the infants under their charge are excellently cared for. Thanks to Dr. Brugler's staff, our physical needs have been well met.

Why then should the Infants' Hospital forsake its present building and move into a section of the new building? The reasons are three in number.

1. *Efficiency* — An isolated unit cannot be as efficient as a unit which is integrated into a total plan.
2. *Economy* — A big factor in the operating expenses of our present plant are the physical and personnel problems created by our widely scattered separate ward units.
3. *Education* — The most unsatisfactory feature of our present teaching program is that house officers must be rotated through so many widely scattered units to provide a variety of clinical experi-

ence that they only spend six weeks out of each of their two years caring for infants.

The new hospital will have a general medical floor (7th Floor) of about 70 beds, divided into two nursing divisions – the Infants' Hospital, designed for infants and toddlers, and the Children's Hospital, designed for children and adolescents. It will be possible to provide care through several teams, each with a group of patients distributed over the whole floor. This will permit the students to see patients of all ages at the same time, as in pediatric practice, and will make it possible for the house officers to get continuity of experience through serving on the general medical floor for a whole year.

I firmly believe that this new location for the Infants' Hospital will maintain its identity and splendid traditions and will allow it to care for almost exactly the same number of patients, but at the same time will promote much better utilization of the extraordinary resources of the whole Children's Medical Center for treatment of its patients and for study of their diseases.

## INFANTS' SERVICE

### Report *for the year ending September 30, 1953*

CLEMENT A. SMITH, M.D., *Chief of Infants' Service*

#### STATISTICAL

| | *1949* | *1950* | *1951* | *1951/52* | *1952/53* |
|---|---|---|---|---|---|
| Total Admissions | 1116 | 1125 | 890 | 1157 | 1126 |
| Average stay (days) | 9.1 | 10.8 | 9.6 | 7.8 | 8.6 |
| Deaths | 79 | 76 | 69 | 99 | 73 |
| Gross mortality | 7.1% | 6.8% | 7.7% | 8.5% | 6.5% |

For the fiscal year ending September 30, 1953, admissions to the Infants' Hospital were comparable to those of the preceding year. The average stay remained below nine days for the second successive year, and the hospital's mortality rate was the lowest reported for the past five years.

No significant change has taken place in the ages of the infants brought to us, or in the diseases from which they suffer. Babies in the newborn period or but little older continue to present our most serious problems, and will do so as long as occasional births continue to be complicated by congenital malformations, difficulty in establishment of normal breathing, and the possibility of incompatibility between maternal and infant blood types.

As a nationally known center we continue to receive a disproportionate number of newborn infants whose blood cells are destroyed by antibodies arising in the mother's body before birth. The first step in reducing the high mortality of these babies was achieved by replacing the infant's blood by transfusion incapable of causing further blood destruction. Some of the infants whose lives were thus saved survived only with permanent brain damage. More recent research by Dr. Diamond, Dr. Allen, Dr. Gellis and Dr. Hsia has shown that such damage occurs only when the by-products of blood cell destruction reach a critical concentration in the infant's circulation. This knowledge has been put to work with very definite success, so that not only survival but intact survival may now be expected for almost all of these infants.

Other research advances of the past year particularly affecting infants have been:

1. The recognition that babies may be born without the ability to form antibodies and thus would succumb to infection unless given repeated injections of gamma globulin.
2. Steady progress in the diagnosis and management of surgically reparable congenital malformations of the heart in infancy.
3. Development of a simple test for distinguishing swallowed maternal blood from the baby's own blood in newborn stools.

Our students and nurses not only learn the diagnosis and treatment of diseases of infancy, but are also made aware of the psychological and emotional aspects of separation from home and mother which hospital necessitates. The staff have increasingly sought to mitigate this by introducing play activities for the older babies and providing more emotional security, even to the smaller infants.

At a time when most hospitals are afflicted with problems of frequent replacement of nurses, our changes of personnel have been few. The general morale of all of our nursing staff has been kept at a high and, therefore, effective level by the supervision of Miss Beardwood, while the house staff has appreciated and responded to the keenness and industry of Dr. John Hartmann as Chief Resident.

## PREMATURE INFANT SERVICE

### Report *for the year ending September 30, 1953*

STEWART H. CLIFFORD, M.D., *Chief of Service*

The sixth year of operation of our program to control infection in the premature nursery has been completed successfully under the

skilled nursing of Miss Berg and her assistants. The actual situation and its comparison with that existing in previous years is as follows:

There has been continued lowering of our premature infant mortality.

The mortality for all weight groups, except the smallest, has registered real improvement. The lowering of mortality has been most marked in the 4½ to 5½ pound group – with a reduction of from 31% to 9%.

Since the smaller the baby the higher the mortality – our over-all mortality is directly dependent on the proportion of very immature infants that are admitted. The proportions of babies in each weight group over the years has been remarkably uniform.

The higher age at death of prematures is perhaps most gratifying of all. In 1953 we had only one death beyond the first week (at 8 weeks), further evidence of the control of infection – the major cause of later deaths.

It is worthy of comment that the gains registered have been made in spite of a liberalization of our admission policy to the end that no premature – irrespective of his age or clinical condition – is denied entrance.

TABLE I

PERCENTAGE DISTRIBUTION OF PREMATURE INFANTS IN VARIOUS WEIGHT GROUPS

| *Birth Weight* | *1944–1947* | *1948–1952* | *1953* |
|---|---|---|---|
| 0 – 2.3 | 11 | 11 | 8 |
| 2.4 – 3.4 | 29 | 27 | 19 |
| 3.5 – 4.6 | 41 | 33 | 37 |
| 4.7 – 5.8 | 19 | 29 | 36 |
| Total Prematures | 508 | 444 | 95 |

TABLE II

PERCENTAGE PREMATURE INFANT MORTALITY IN VARIOUS WEIGHT GROUPS

| *Birth Weight* | *1944–1947* | *1948–1952* | *1953* |
|---|---|---|---|
| 0 – 2.3 | 97 | 85 | 100 |
| 2.4 – 3.4 | 66 | 40 | 39 |
| 3.5 – 4.6 | 39 | 21 | 17 |
| 4.7 – 5.8 | 31 | 26 | 9 |
| 0 – 5.8 | 50 | 34 | 26 |

## TABLE III

### Percentage of Premature Infant Deaths at Various Ages

| *Age at Death (days)* | *1944–1947* | *1948–1952* | *1953* |
|---|---|---|---|
| 0 – 7 | 68 | 92 | 96 |
| 8 – 21 | 13 | 4 | 0 |
| 22 – 25 | 12 | 1 | 0 |
| 36 + | 7 | 3 | 4 |

# The Children's Mission to Children

*Founded in 1849 by a group of Unitarian Sunday School Children under the initiative of nine-year-old Fannie Merrill. Always non-sectarian, for more than a century the Mission has been a pioneer in social work. More than fifty years ago a plan was evolved for foster homes rather than the institutional care which was the fashion of the day. This was soon extended to include convalescent children who could not be returned to their own homes and who needed the affection and care of competent foster mothers in the non-institutional atmosphere of real homes.*

*This pattern, considered revolutionary when it was set several decades ago, conforms to modern psychiatric teaching. Practical experience with its workings has more than proved its essential soundness.*

## Report *for the year ending September 30, 1953*

| | |
|---|---|
| Children in care October 1, 1952 | 63 |
| Children receiving care during fiscal year | 173 |
| *Total receiving service* | 236 |
| Number of repeat applications | 8 |
| | 228 |

Of the children served, 146 received 18,154 days care in foster homes – 93 of them in group convalescent homes, 53 in individual foster homes. Of the remaining 82, 39 received service in hospitals and other institutions, 43 were given service in their own homes. This included casework service to parents and children, as well as assistance

in using other community resources. 28 children were given special summer placements for building up.

The teaching function of the Mission was fulfilled with students taking graduate studies in Social Work at Simmons College and Boston University.

COMPARISON OF THIS FISCAL YEAR WITH 4 PRECEDING YEARS

| | *Oct. to Oct. 1952–3* | *Oct. to Oct. 1951–2* | *Jan. to Oct. 1951 (9 mos.)* | *Jan. to Jan. 1950* | *Jan. to Jan. 1949* |
|---|---|---|---|---|---|
| Children in care first of year | 63 | 83 | 74 | 84 | 109 |
| Applications during year | 173 | 133 | 141 | 151 | 153 |
| Total service given | 236 | 216 | 215 | 235 | 262 |

An intake study conducted by Children's Mission during the past year with a few large hospitals and social agencies brought out a need for greater variety of placements than was formerly the case. Hospitals requested placements to help in diagnosis, especially of those children where it was suspected that there were many emotional factors involved. More special homes for babies were needed, particularly foster homes that could care for the baby with a long-time medical need, so that such infants would not have to continue on hospital wards. Little babies, perhaps more than older children, must have the love and care of foster parents, when their own parents cannot care for them, if they are to steer clear of emotional disabilities in the future. More placements were wanted for children with seizures, particularly those who also presented behavior problems.

Children's Mission has endeavored to meet these needs by a more flexible policy of intake, development of a greater number of foster homes, emphasizing those with foster mothers who have had nursing training. This accounts for the increased number of applications serviced this year. Now that Children's Mission has a full casework staff, it is planned to continue the intake study with other hospitals and agencies not previously contacted.

# Association of the House of the Good Samaritan

*The House of the Good Samaritan was founded in 1860 through the initiative and generosity of Miss Anne Smith Robbins who was its superintendent for nearly forty years. Established for care of the long term sick poor, it was originally located on MacLean Street in Boston. The present site at 25 Binney Street adjacent to the Children's Hospital was occupied in 1905.*

*The House of the Good Samaritan opened the first orthopedic ward in the country as early as 1863. Almost from the first, rheumatic fever patients had been admitted, and in 1933 attention was concentrated exclusively on this disease. Valuable research and teaching are carried out in the area of this disease and generations of Harvard Medical School students remember the "Good Sam" with affection as the place where they first used a stethoscope on a patient.*

*The school system of the City of Boston supplies teachers and undertakes the education of patients at all school age levels.*

*In 1946 the Good Samaritan joined the Children's Medical Center.*

## Report *for the year ending September 30, 1953*

*Statistics*

Contrary to the general trend of recent years in hospitals in general the length of stay of patients shows a slight rise. This seems to have been the result, at least in part, of the application of new methods of treatment of patients with rheumatic fever with prescribed courses

covering a number of weeks. This shows up in the slight increase (about 6%) in patient days in spite of the fact that admissions were somewhat fewer than in the previous year.

| | |
|---|---|
| Admissions | 190 |
| Average Daily Census | 50 |
| Average length of stay | 92 days |

*Research*

Pioneer work done in the past at the Good Samaritan resulted in important contributions in the field of prevention both of recurrence as well as of initial attacks of the disease. Currently research is directed to the two areas of therapy and prevention with basic research being done in an attempt to learn more about the cause of rheumatic fever. In regard to therapy enough work has been done at the Good Samaritan to offer some encouragement that hormones, – ACTH and cortisone, may be effective in treating the disease especially if it can be reorganized early and therapy started before appreciable heart damage develops.

In regard to prevention, the administration of daily doses of penicillin as standard procedure has been effective in preventing streptococcal sore throat, which has been recognized for some years as the prime cause of the disease. In the past, when antibiotics were unknown, any outbreak of streptococcal sore throat might be disastrous. Today, however, this infection can be avoided and the regular administration of antibiotics to patients after discharge has been successful in preventing the recurrences which were once quite common.

Following this line, research into more inclusive preventive methods is now in progress. In practice this must consist of educating both parents and family doctors to be on the alert and to recognize the need for early diagnosis and treatment of streptococcal sore throat. By these means it is possible to visualize a time when rheumatic fever may become much rarer than it is today.

*Teaching*

Traditionally the Good Samaritan is the place where Harvard medical students gain experience in the use of the stethoscope. As in previous years groups of students from the second year on attended for instruction. House officers, with the exception of the Chief resident physician, appointed for a year, were supplied on the customary rotating basis from the Children's Hospital.

# The Hospital and Convalescent Home for Children, Wellesley

*The Hospital and Convalescent Home for Children was established in Weston in 1874 by the Ladies Aid Association of the Children's Hospital. The following year it was moved to Wellesley where the present main building was occupied in 1892. The home was organized to give long term care to children which was not available in their homes and yet did not require full hospital nursing. The Home occupied a pioneer position in the care of convalescent children and over the years has been a very busy unit working closely with the Children's Hospital. In the changing pattern of disease and medical care, the period of convalescence has been greatly shortened in recent years and many of the diseases which were of long duration and made the greatest demands upon the home are so well controlled that their convalescence is no longer a problem. The development of antibiotics has contributed greatly to this transition. Another factor is the improvement in transportation which is available to the average family, so that the child may be cared for at home and transported regularly for treatment and medical care.*

*With the decline in the demands for ordinary convalescent care parts of the home have been converted to special activities. In 1948 one of the smaller buildings was converted into a nursery training school for children with cerebral palsy.*

*In October of 1950, one of the major wards was converted to a respirator unit for patients with poliomyelitis. This was developed in cooperation with the National Foundation for Infantile Paralysis as the Mary MacArthur Memorial Respirator Unit, a gift to the National Foundation for Infantile Paralysis in memory of the daughter of Helen Hayes the world famous actress.*

*The Unit is a consultative one for a large regional area in the treatment and care of patients who have the respiratory form of poliomyelitis. In addition it exercises a major function in research in the problems of the respirator patient and respiratory physiology as well as in the testing and evaluating of mechanical equipment and respiratory aids. It is a teaching center for instruction in the care of these patients.*

*Today the Wellesley Home has three areas of major activity within its confines: a convalescent home, a respirator unit and a nursery school for children with cerebral palsy.*

## Report *for the year ending September 30, 1953*

*Statistics*

| | *1951–52* | | *1952–53* | |
|---|---|---|---|---|
| | *Admissions* | *Hospital days* | *Admissions* | *Hospital days* |
| Weld and Infants' ward | 186 | 7,194 | 137 | 7,095 |
| Mary MacArthur Respirator Unit | 18 | 4,126 | 20 | 4,248 |
| | | 11,320 | | 12,333 |

### The Mary MacArthur Memorial Respirator Unit

*General*

During the year the Unit was filled to the functional capacity of twelve patients, all of whom were very severely involved. The average length of hospital stay of those discharged was longer than usual, namely 200 days. This long period of admission was in large part an index of the severe degree of paralysis and the chronic nature of the disease which these patients have. On the average they had had the disease for seven months before they were admitted and all had severe quadriplegia. Many had practically no musculature remaining. They presented, therefore, not only severe respiratory problems but also very difficult problems of general rehabilitation. Despite this only one of the thirteen discharged during the period still required the tank respirator. Three no longer needed any type of breathing assistance and nine needed some accessory respiratory aid other than the tank respirator, either part-time or full time. Eleven of the thirteen were transferred

to their homes whereas two were transferred to other institutions due to difficulties in home environment.

The index of improvement of these patients was much more than the one of improving their respiration and making them independent of the respirator. The musculo-skeletal system must be made as effective as possible and much of their future depends upon how effectively that can be done. Patients are aided in emotional adjustment to their handicap and in general adjustments to the future. Mind and emotions must be considered equally with physical rehabilitation. Not only must these severely disabled patients be prepared for discharge but also at the same time his home, family, and community must be prepared to receive him after discharge, entailing a great deal of field work by members of the staff. These, and many more factors, contribute to the general rehabilitation of the patient and to the effective work of the Respirator Center.

The Unit has a long waiting list. If it is to function at its best it needs some further expansion provided that this can be worked out as a cooperative effort with the National Foundation for Infantile Paralysis.

*Research*

Medical care and rehabilitation of the respirator patient at the Unit are so intermittently woven with research that it is difficult to separate them. Extensive investigations were made in the field of respiratory physiology as has been the case since the Unit was opened, — research in this area being a combined effort of the Unit and the Harvard School of Public Health. Many improvements were developed at the Unit in the treatment of the patient suffering from respiratory poliomyelitis.

Extensive psychiatric investigations involved the emotional effect of severe respiratory poliomyelitis and the adjustment of the individual to such catastrophic injury. Various types of therapeutic measures and equipment were tested and evaluated both in the care of the respiratory problems of the patient and in the musculo-skeletal problems which these patients exhibit.

*Teaching*

The Respirator Unit participated in the Courses for Poliomyelitis of the Children's Medical Center and continued to play an important role in instructing doctors, nurses, medical students and attendants in the problems and techniques associated with the care of this type of patient. Visitors have included doctors from ten foreign countries.

## Cerebral Palsy Nursery School

With 29 handicapped children enrolled, – half the group attending on alternate days, the emphasis at the school was on meaningful experience as well as on therapy. This pioneer approach which was initiated a few years ago has already proved itself for many graduates of the nursery school have shown themselves able to take their place in competitive education. Public school authorities were cooperative in arranging schedules to make the transition from our school to more competitive schools as easy as possible.

Attention was given to parent councilling and the P.T.A. continued to be very active. The benefits derived from mutual contact were considerable and parents have become welded into an enthusiastic group ready to give time and energy to group activities (eg: painting and repair work) to help the school.

Teaching activities were continued. The school was used extensively as a demonstration and teaching center for therapists and nursery school teachers and by the School of Education of Boston University as a workshop.

# The Sharon Cardiovascular Unit

*The Sharon Sanatorium founded in Sharon, Massachusetts, in 1891, was a pioneer in the open air treatment of rheumatic fever in children. It was also one of the first institutions to make outdoor care available near the city. In 1951 the work of the Sharon Sanatorium was transferred into the physical plant of the Children's Medical Center and the unit was set up and arranged for the study and the surgical treatment of congenital cardio-vascular abnormalities. When new floors were added to Building C of the Children's Hospital, one of them was paid for by the Sharon group, and was designated the Sharon Cardiovascular Unit.*

## Report *for the year ending September 30, 1953*

The addition of the Sharon Unit to the Children's Medical Center has proved to be a most notable achievement, providing housing, facilities and staff for the study and care of a group of afflicted children who are coming to us in increasing numbers. The affiliation has given us a timely and most effective unit in rounding out the programs for patient care provided by the center.

The physical layout of the Sharon Cardiovascular floor has proved to be a most useful one and fits exceedingly well the needs for the type of work which is conducted within it. The arrangements and sizes of rooms give elasticity in caring for problems of widely varying natures. Patients with wide ranges in ages, from infancy to adulthood, can be separated as needed. A person can be isolated in a single room when undergoing special study or when quiet is desirable. Patients who are quite ill can be moved together, while convalescent ones can be

gathered in twos, threes, or fours as seem appropriate. Youngsters who are up and about can be allowed in the recreation room where they play, listen to music, or watch television. The small laboratory on the floor is quite adequate for performing those tests which should be done promptly and which do not require complicated apparatus and experienced technicians which are available in the main laboratories of the hospital. A class room at the end of the hall is very convenient for gatherings of medical students, house-officers, or other meetings of the staff. The position of the main desk in the central part of the corridor reduces the work of nurses and the distances they must travel. The plan and layout of the Sharon Cardiovascular floor has proved extremely good.

Of particular interest has been the adoption of a technique for the use of special-duty nurses. In former years, when graduates were constantly and abundantly available, "specials" could be ordered as desired by families or be brought in by the doctors at times when they felt that a critical condition warranted such coverage. This practice often led to the unnecessary employment of extra nurses, or nurses would be kept on duty long after a crisis had passed. Often a nurse would be sequestered unnecessarily with a patient, when at the same moment it was impossible to find an additional nurse for another child who was in dire straits.

In these days when there is a serious shortage of nurses, more effective arrangements for their employment had to be devised. Calling special nurses by family or doctor has been abolished. Instead, the head nurse on the floor is charged with the duty of using whatever additional nurses are available in any way that she sees fit, placing them with those patients who at the moment are in need of extra attention. This gives the head nurse authority and fluidity of action, permitting her to make best use of available personnel, shifting them from place to place as the demands of the hour might require. This approach has permitted a patient-load which could not have been handled under the old system.

The Sharon Cardiovascular Unit represents a departure from other units in The Children's Medical Center in that it is not covered or staffed completely by any single specialist group. The problems in the cardiosvascular field are such that both physicians and surgeons should be available, therefore the professional staff of the Unit includes both. The medical work has been under the direction of Dr. Alexander S. Nadas, with the aid of Dr. Walter L. Goodale, and the Surgical field has been covered by Dr. Robert E. Gross and Dr. Luther A. Longino. With their various assistants and house-officers, there has been a free inter-play at all times between these two parts of the combined staff, so that immediately and constantly patients have had complete medical

and surgical supervision. These arrangements have been most effective in providing good professional coverage.

The supporting staff, – house-officers and research fellows, has been excellent. Outstanding medical and surgical care has been given at all hours of the day and night. On the medical research side, Dr. Warren Guntheroth, Dr. Benjamin K. Silverman, and Dr. Henry J. Lang, Jr. have been conducting investigations both of a clinical nature and in related laboratory studies. On the surgical side, Dr. Elton Watkins, Jr. has undertaken extensive experimental work in developing new surgical techniques for correction of various abnormalities.

It is particularly important to note the favorable comments and reactions of patients who have been discharged from the Sharon Cardiovascular Unit. In spite of the fact that these subjects have passed through days or weeks of hospital stay, or serious operative procedure, the vast majority of them have spontaneously remarked about the human understanding and the gentleness which they have encountered in the hospital. All of the nurses have maintained a cheerfulness which is so important in creating a proper setting for patients who enter an institution which is new and strange. It is amazing to see patients, who understandably have fears and apprehensions as they come in for some ailment of their heart or circulation, very quickly and thoroughly have these tensions relieved. We certainly owe much to our nurses for the job that they have been doing, not only for the professional acts which they have carried out so well, but also for the kindly and gentle way in which they have handled the subjects who are given over to them for care. We have literally scores of letters from patients or families after their return home, commenting upon this most extraordinary atmosphere which the staff has been able to set up and maintain. It is one of our greatest assets.

During the calendar year of 1953, the Cardiac Out-Patient Clinic of the Children's Hospital had about 1500 patient-visits, including approximately 500 new patients. They came here for x-ray examinations, electrocardiographic tracings, or other tests required for a diagnostic work-up. In the electrocardiographic laboratory about 2300 electrocardiograms have been made and analyzed.

During 1953, 239 medical patients were admitted to beds in Sharon Cardiovascular Ward for study or for treatment, 165 of whom had cardiac catheterization and 54 angiocardiographic studies. Various other procedures, including phono-cardiograms, arterial oxygen saturations, and studies of circulation times were performed. Because the ward is organized quite efficiently for diagnostic work of such conditions, patients were generally admitted, studied, and discharged within three or four days.

In 1953 the surgical load in correction or alleviation of congenital

malformations of the heart and great blood vessels makes the Sharon Cardiovascular Unit one of the most active in the world. For the year 1953, the surgical work can be summarized as follows: 38 patients were operated upon for coarctation of the aorta, 70 for surgical closure of a patent ductus arteriosus, 8 babies for division of "vascular rings," 41 patients for alleviation of a tetralogy of Fallot, and 14 patients for repair of interauricular septal defects. The first four are now rather standardized and widely-accepted procedures. The last (which means the surgical closure of a hole between the two sides of a heart) is one of the important contributions made by this group in the rapidly-expanding field of surgery for correction of congenital malformations of the heart.

We are profoundly grateful to the Sharon Trustees for their vision in establishment and maintenance of this Unit. It provides a physical plant and a most encouraging atmosphere for the drawing together of the various facilities and professional coverages which are essential for carrying out this type of work in an efficient manner.

# Charitable Surgical Appliance Shop

*The Appliance Shop was established in 1886 adjacent to the Children's Hospital on Huntington Avenue. For nearly seventy years the Shop has been an important factor in the Orthopedic Services rendered by the Children's. Appliances are provided for young and old and it was here, incidentally, that President Franklin D. Roosevelt's first braces were made.*

## Report *for the year ending September 30, 1953*

In the year 1952–53 the shop completed a total of more than eleven thousand separate jobs, approximately five thousand of which were repairs and the remainder new work. Customers of all ages were serviced, some of whom had been coming to the shop regularly for more than fifty years. The shop did a total of about fifty thousand dollars worth of business during the year. Although the intention is to supply appliances at cost, the shop did not quite pay its way, – largely due to the inability of all customers to meet the full cost of their appliances.

Of their nature, surgical appliances are expensive to make. For those who must wear them quality is of the utmost importance. Braces soon become almost a part of the wearer and a break is likely to have serious consequences, – a painful fall perhaps with the strong probability of broken bones. In the Charitable Surgical Appliance Shop only materials of the highest quality are used. Aluminum alloys are those which go into jet aircraft. Electric furnace steels are selected because they alone can be depended on for constant analysis and test results. The highest quality hides, although almost double the cost of grades which look the same, give much more than twice the service.

In making the average brace only an insignificant proportion can be prefabricated by quantity production methods. About 95% of the brace must be hand-tailored to meet each individual's personal needs. Forging, machining, leather work, are all done by hand, — using of course mechanical tools specially suited to their tasks. The success of the product rests on the individual skill of the craftsman who must of necessity be a master of many crafts. The shop is particularly fortunate in its highly trained manager, Mr. E. E. Roberts who among other experiences, was senior production engineer at the Springfield Armory.

It is hoped that the shop may soon be able to extend its activities to aid those with disabled feet. This has become a particularly important matter since the agency for that purpose, organized by the Shoe Manufacturers Association, has recently been closed down. The Appliance Shop, however, has inherited from it an ingenious machine from which exact lasts can be made to conform to any disability. It consists briefly of a tray filled with tiny ball bearings in which the foot is placed. When a normal stance has been achieved the tray full of bearings is "frozen" by means of a powerful magnetic current thus providing an exact mould from which a cast can be made.

Actual operation of the foot-cast making machine must await the provision of more space. When that is provided it is to be hoped that the shop will be able to expand its operations in other directions as well. Even now there is a very considerable demand for surgical appliances of all kinds which cannot be fulfilled for lack of production capacity. There seems no doubt that greater production would help to cut costs with the result that the shop would be in a better position to break even and possibly to hand welcome savings on to the customers.

# The Children's Cancer Research Foundation, Inc.

*Organized in 1948 as a unit of the Children's Medical Center. The history and work of this unit are described on pages 37–38.*

# Judge Baker Guidance Center

*The Judge Baker Guidance Center was established in 1917 as a memorial to Judge Baker who had long been interested in the problems of juvenile delinquency and the adjustment problems of young people generally. It was established as what would be known today as a "specialized" child guidance clinic, — an agency to aid the Boston Juvenile Court.*

*In the intervening years policy has broadened, emphases have changed and the Judge Baker has developed into a general child psychiatric clinic. From the beginning, however, there has been deep concern with training and education. The result is that today Judge Baker alumni have served in virtually all large cities in the United States and in virtually every country abroad which has child psychiatric services.*

*The Judge Baker Guidance Center becomes a Unit of the Medical Center on the first day of the new financial year, October 1, 1953.*

# FINANCIAL REPORT,

# TRUSTEES, OFFICERS

# AND STAFF

# THE CHILDREN'S MEDICAL CENTER

*Consolidation of Accounts of*

THE CHILDREN'S HOSPITAL, INFANTS' HOSPITAL, THE HOSPITAL AND CONVALESCENT HOME FOR CHILDREN, THE HOUSE OF THE GOOD SAMARITAN, SHARON SANATORIUM, THE CHILDREN'S MISSION TO CHILDREN, CHILDREN'S CANCER RESEARCH FOUNDATION, CHARITABLE SURGICAL APPLIANCE SHOP, THE CHILDREN'S MEDICAL CENTER

*as of September 30, 1953*

*ASSETS*

| | | |
|---|---|---|
| Cash on hand and in banks | | $1,378,834.17 |
| Patients' accounts receivable less reserves | | 881,295.54 |
| Receivable from governments and institutions | | 94,061.37 |
| Inventories of supplies | | 116,497.50 |
| Investments: stocks, bonds and real estate at cost | | 7,834,142.27 |
| Cash surrender value of life insurance | | 50,424.09 |
| Prepaid expenses | | 50,571.82 |
| TOTAL GENERAL FUND ASSETS | | $10,405,826.76 |
| Current funds for designated purposes | | 797,479.68 |
| Stock and bonds, restricted funds, at cost | | 5,219,543.02 |
| Land, buildings and equipment less depreciation | $5,025,936.12 | |
| Construction in process | 1,602,797.80 | 6,628,733.92 |
| TOTAL CONSOLIDATED ASSETS | | $23,051,583.38 |

*LIABILITIES*

| | | |
|---|---|---|
| Accounts payable | | $ 66,861.36 |
| Deposits due to patients, etc. | | 23,379.12 |
| Employee taxes withheld | | 31,557.78 |
| Accrued wages and expenses | | 17,875.39 |
| Reserve for workmen's compensation claims | | 13,774.51 |
| General fund capital | | 10,252,378.60 |
| TOTAL GENERAL FUND LIABILITIES | | $10,405,826.76 |
| Current funds for designated purposes | | 797,479.68 |
| Restricted endorsement funds | | 5,219,543.02 |
| Plant capital | $5,853,733.92 | |
| Mortgage on real estate | 775,000.00 | 6,628,733.92 |
| TOTAL LIABILITIES | | $23,051,583.38 |

# The Children's Medical Center, Inc.

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| | |
|---|---|
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| *Vice President* | G. Peabody Gardner |
| *Vice President* | P. D. Howe |
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| *Secretary* | Arnold W. Hunnewell |

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# The Children's Hospital

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| | |
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# Staff—September 30, 1953

## *The Children's Hospital*

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*Physician-in-Chief* Charles A. Janeway, M.D.

*Associate Chief of the Medical Service* Louis K. Diamond, M.D.

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| *Infants' Medical Division* | Clement A. Smith, M.D. |
| *Children's Medical Division* | William Berenberg, M.D. |
| *Isolation Division* | R. Cannon Eley, M.D. |
| *Private Medical Division* | John A. V. Davies, M.D. |
| *Hospital and Convalescent Home at Wellesley* | Henry E. Gallup, M.D. |

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| John A. V. Davies, M.D. | David D. Rutstein, M.D. |
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| J. Roswell Gallagher, M.D. | Harold C. Stuart, M.D. |

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| Douglas T. Davidson, M.D. | Harry L. Mueller, M.D. |
| Samuel Dooley, M.D. | Alexander S. Nadas, M.D. |
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Leonard Apt, M.D.
Frederick Blumenthal, M.D.
T. Berry Brazelton, M.D.
James T. Cameron, M.D.
Albert Cohen, M.D.
Earle F. Cohen, M.D.
Charles D. Cook, M.D.
David Gitlin, M.D.
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Robert Schwartz, M.D.
Gerald B. Shattuck, M.D.
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William D. Winter, M.D.

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| Herbert I. Harris, M.D. | *Associate Physician* |
| Douglas Cowne, M.D. | *Assistant Physician* |
| Felix P. Heald, M.D. | *Assistant Physician* |
| Constance D. Gallagher, A.B. | *Research Associate* |
| Barbara Kimball, Ph.D. | *Research Associate* |

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| | |
|---|---|
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| Harry Mueller, M.D. | *Associate Allergist* |

### CARDIOLOGY

| | |
|---|---|
| Alexander S. Nadas, M.D. | *Cardiologist* |
| Hyman Green, M.D. | *Associate Cardiologist* |
| Benedict F. Massell, M.D. | *Chief, Rheumatic Fever Clinic* |
| Walter T. Goodale, M.D. | *Associate Cardiologist in charge of Cardiorespiratory Laboratory* |
| Jacob Wallace, M.D. | *Assistant Cardiologist* |
| Albert Cohen, M.D. | *Assistant Cardiologist* |
| Allen L. Friedlich, M.D. | *Assistant Cardiologist* |

* To September 30.

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| | |
|---|---|
| Harold C. Stuart, M.D. | *Consulting Physician* |
| Samuel Dooley, M.D. | *Chief* |
| Leon Sternfeld, M.D. | *Assistant Physician* |

HEMATOLOGY

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|---|---|
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| F. H. Allen, M.D. | *Associate Hematologist* |
| Eric J. Wake, M.D. | *Assistant Physician (Hematology)* |
| Alan R. Jones, M.D. | *Research Associate* |
| Doris A. Howell, M.D. | *Assistant Hematologist* |

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| David Gitlin, M.D. | *Assistant Physician* |
| I. Herbert Scheinberg, M.D. | *Research Associate* |
| Robert Schwartz, M.D. | *Assistant Physician* |
| Irena Antonowicz | *Research Assistant* |

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|---|---|
| Bronson Crothers, M.D. | *Consulting Neurologist* |
| Randolph K. Byers, M.D. | *Neurologist* |
| William G. Lennox, M.D. | *Chief, Seizure Unit* |
| Douglas T. Davidson, M.D. | *Associate Physician, Seizure Unit* |
| Cesare Lombroso, M.D. | *Associate Physician, Seizure Unit* |
| Edith Meyer, Ph.D. | *Psychologist* |
| Harriet Sands, Ed.M. | *Assistant Psychologist* |
| Dorothy D. Pope, M.A. | *Assistant Psychologist* |

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|---|---|
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| Consuelo K. Tagiuri, M.D. | *Assistant Psychiatrist* |
| Henry Wermer, M.D. | *Assistant Psychiatrist* |
| Harold Wolman, M.D. | *Assistant Psychiatrist* |
| Joseph P. Lord, Ph.D. | *Associate Psychologist* |

[NOTE: On the first day of the new fiscal year, October 1, 1953, a separate Department of Psychiatry came into being with Dr. George E. Gardener as Psychiatrist-in-Chief.]

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| Lyman G. Richards, M.D. | *Assistant Otolaryngologist* |
| Harold G. Tobey, M.D. | *Assistant Otolaryngologist* |
| John C. Trakas, M.D. | *Assistant Otolaryngologist* |
| Donald J. Weekes, M.D. | *Assistant Otolaryngologist* |

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| Garrett L. Sullivan, M.D. | *Associate Ophthalmologist* |
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*Assistant Radiologist* Herbert G. Petersen, Jr., M.D.

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Virginia Downing, M.D. Rudolf Toch, M.D.

*Visiting Physicians*

Harry Shwachman, M.D. Samuel Dooley, M.D.

*Assistant Physicians*

Ruth Phillips, M.D. James P. King, M.D.* Ruth Appleton, M.D.

NURSING SERVICE

*Director, School of Nursing and Nursing Service*
Muriel B. Vesey, R.N., B.S.Ed.

*Associate Director, School of Nursing*
Theresa A. Hurley, R.N., B.S.Ed., M.S.Ed.

*Assistant Director, School of Nursing and Nursing Service*
Phyllis G. Downing, R.N., A.B.

CONSULTANTS

| | |
|---|---|
| Benjamin Alexander, M.D. | *Medicine* |
| Donald L. Augustine, M.D. | *Comparative Pathology* |
| Joseph S. Barr, M.D. | *Orthopaedic Surgery* |
| Elkan Blout, Ph.D. | *Biophysical Chemistry* |
| Leo Berman, M.D. | *Psychiatry* |
| Hathorn P. Brown, M.D. | *Urology* |
| C. Sidney Burwell, M.D. | *Medicine* |
| Allan M. Butler, M.D. | *Medicine* |
| Paul A. Chandler, M.D. | *Ophthalmology* |
| Austin W. Cheever, M.D. | *Dermatology* |
| David G. Cogan, M.D. | *Ophthalmology* |
| Gustave Dammin, M.D. | *Pathology* |
| Edwin B. Dunphy, M.D. | *Ophthalmology* |
| J. Englebert Dunphy, M.D. | *Surgery* |
| Lewis Dexter, M.D. | *Medicine* |
| Harry Eagle, Ph.D. | *Microbiology* |
| Kendall Emerson, M.D. | *Medicine* |

* To September 1, 1953.

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|---|---|
| Albert B. Ferguson, M.D. | *Radiology* |
| Jacob Fine, M.D. | *Anesthesiology* |
| Chester N. Frazier, M.D. | *Dermatology* |
| Gustave Freeman, M.D. | *Biology* |
| Jacob Furth, M.D. | *Experimental Pathology* |
| George E. Gardner, M.D. | *Psychiatry* |
| J. Hartwell Harrison, M.D. | *Urology* |
| A. Baird Hastings, Ph.D. | *Biological Chemistry* |
| Arthur Hertig, M.D. | *Pathology* |
| William R. Hill, M.D. | *Dermatology* |
| Otto Krayer, M.D. | *Pharmacology* |
| Eugene M. Landis, M.D. | *Physiology* |
| Samuel A. Levine, M.D. | *Medicine* |
| Walter F. Lever, M.D. | *Dermatology* |
| Francis D. Moore, M.D. | *Surgery* |
| J. Howard Mueller, M.D. | *Bacteriology* |
| Francis C. Newton, M.D. | *Surgery* |
| Alwin Pappenheimer, M.D. | *Pathology* |
| Duncan Reid, M.D. | *Obstetrics* |
| Stanley Sarnoff, M.D. | *Physiology* |
| Leroy A. Schall, M.D. | *Otolaryngology* |
| Arnold Seligman, M.D. | *Biochemistry* |
| Murray Shear, M.D. | *Biochemistry* |
| Merrill C. Sosman, M.D. | *Radiology* |
| Somers H. Sturgis, M.D. | *Gynecology* |
| George W. Thorn, M.D. | *Medicine* |
| Frederick H. Verhoeff, M.D. | *Ophthalmology* |
| Carl W. Walter, M.D. | *Surgery* |
| Shields Warren, M.D. | *Pathology* |
| Louis Weinstein, M.D. | *Infectious Diseases* |
| David Weisberger, M.D., D.M.D. | *Stomatology* |
| Conrad Wesselhoeft, M.D. | *Infectious Diseases* |
| James L. Whittenberger, M.D. | *Physiology* |
| George Wislocki, M.D. | *Anatomy* |

EMERITI

| | |
|---|---|
| J. Lewis Bremer, M.D. | *Consultant in Embryology* |
| Bronson Crothers, M.D. | *Physician* |
| George D. Cutler, M.D. | *Associate Surgeon* |
| James L. Gamble, M.D. | *Physician* |
| Eliot Hubbard, Jr., M.D. | *Physician* |
| William E. Ladd, M.D. | *Surgeon-in-Chief* |
| Charles G. Mixter, M.D. | *Consultant in Surgery* |
| Frank R. Ober, M.D. | *Orthopaedic Surgeon-in-Chief* |
| Robert B. Osgood, M.D. | *Orthopaedic Surgeon-in-Chief* |
| James W. Sever, M.D. | *Orthopaedic Surgeon* |
| Richard M. Smith, M.D. | *Physician-in-Chief* |
| Philip H. Sylvester, M.D. | *Associate Visiting Physician* |
| S. Burt Wolbach, M.D. | *Pathologist-in-Chief* |
| Edwin T. Wyman, M.D. | *Physician* |

## *The Children's Mission to Children*

*Medical Director* Benedict F. Massell, M.D.
*General Secretary* Mrs. Anne W. Cochintu, B.S., M.S.S.

## *Association of The House of the Good Samaritan*

MEDICAL STAFF

*Chief of Staff* Howard B. Sprague, M.D.

*Visiting Physicians*

Edward F. Bland, M.D. — David D. Rutstein, M.D.
T. Duckett Jones, M.D. — George P. Sturgis, M.D.
Benedict F. Massell, M.D. — Conger Williams, M.D.
J. Wallace Zeller, M.D.

*Assistant Visiting Physicians*

Sprague W. Hazard, M.D. — Alexander Nadas, M.D.
Allan L. Friedlich, M.D. — James Don, M.D.
Edwin O. Wheeler, M.D.

MEDICAL RESEARCH DEPARTMENT

*Research Director* Benedict F. Massell, M.D.
*Research Associate* Joseph Miller, M.D.
*Research Fellow* Melvin Kaplan, M.D.

*Fellows in Medicine*

Pauline O'Connell, M.D. — Patrick Ongley, M.D.
Raymond Walther, M.D.

CONSULTING STAFF

*Cardiac Surgeon* Edward D. Churchill, M.D.
*Ophthalmologist* Trygve Gunderson, M.D.

*Surgeons*

Robert Gross, M.D. — John W. Spellman, M.D.
Grantley W. Taylor, M.D.

*Orthopaedic Surgeons*

William T. Green, M.D. — Robert H. Morris, M.D.

*Pathologist* Sidney Farber, M.D.
*Pediatrician* Charles A. Janeway, M.D.

*Radiologists*

E. B. D. Neuhauser, M.D. — Martin Wittenborg, M.D.

*Resident Physician* Sujoy B. Roy, M.D.
*Superintendent* Elma J. Hussey, R.N.
*Assistant Superintendent* Sarah L. Still, R.N.

## *The Hospital and Convalescent Home for Children, Wellesley*

| | |
|---|---|
| *Physician-in-Chief* | Henry B. Gallup, M.D. |
| *Resident Physician* | Florence E. Mayer, M.D. |
| *Administrative Assistant* | Mrs. Gladys M. Conner |

### Mary MacArthur Memorial Respirator Unit

| | |
|---|---|
| *Medical Director* | William T. Green, M.D. |
| *Associate Medical Director* | Charles H. Janeway, M.D. |
| *Orthopaedic Surgeon, Assistant to Medical Director and Co-ordinating Medical Officer* | Arthur W. Trott, M.D. |
| *Physician and Director of Respiratory Laboratory* | Benjamin Ferris, M.D. |
| *Orthopaedic Surgeon* | David S. Grice, M.D. |
| *Orthopaedic Surgeon* | Henry H. Banks, M.D. |
| *Otolaryngologist* | Carlyle G. Flake, M.D. |
| *Associate Otolaryngologist* | Charles Ferguson, M.D. |
| *Roentgenologist* | E. B. D. Neuhauser, M.D. |
| *Associate Roentgenologist* | Martin Wittenborg, M.D. |
| *Surgeon* | Robert E. Gross, M.D. |
| *Neurosurgeon* | Franc D. Ingraham, M.D. |
| *Associate Neurosurgeon* | Donald E. Matson, M.D. |
| *Anesthetist* | Robert Smith, M.D. |
| *Pathologist* | Sidney Farber, M.D. |
| *Psychiatrist* | Dane G. Prugh, M.D. |
| *Assistant Psychiatrist* | Stanley Cath, M.D. |
| *Consultants in Psychiatry* | Leo Berman, M.D.<br>Lydia Dawes, M.D.<br>George Gardner, M.D. |
| *Consultant in Psychology* | Joseph P. Lord, Ph.D. |
| *Consultant in Physiology* | James Whittenberger, M.D. |
| *Urologist* | Hathorn Brown, M.D. |
| *Dentist* | Paul Losch, D.D.S. |
| *Opthalmologist* | Trygve Gunderson, M.D. |

### Nursery School of the Cerebral Palsy Unit

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|---|---|
| *Chairman of the Cerebral Palsy Unit* | William Berenberg, M.D. |
| *Principal of the School* | Miss Eloise Maloney |

## *Infant's Hospital**

| | |
|---|---|
| *Physician-in-Chief* | Charles A. Janeway, M.D. |
| *Chief, Infant's Medical Division* | Clement A. Smith, M.D. |
| *Chief, Premature Division* | Stewart H. Clifford, M.D. |

* Appointments to The Children's Hospital are considered as being to Infant's Hospital as well.

## *The Sharon Sanatorium*

(The Sharon Cardiovascular Unit)

*Surgeon-in-Chief* Robert E. Gross, M.D.
*Physician-in-Chief* Alexander S. Nadas, M.D.

## *Judge Baker Guidance Center*

*Director* George E. Gardner, Ph.D., M.D.

*Directors Emeriti*

William Healy, M.D. Augusta F. Bronner, Ph.D.

*Psychiatrists*

John Coolidge, M.D.
Irving Kaufman, M.D.
Elizabeth S. Makkay, M.D.
Dorothy Macnaughton, M.D.
Howard S. Selvig, M.D.
Elvin V. Semrad, M.D.

*Psychologists*

*Chief* Bessie Sperry, M.A.
Pauline B. Hahn, Ph.D.
Barbara Kimball, Ph.D.
Walter Langer, Ph.D.
Robert A. Young, Ed.D.
David Ulrich, M.A.
Lora Heims, M.A.

*Psychiatric Social Workers*

*Chief* Elizabeth H. Holmes, M.S.S.
Gloria Cottrell, M.S.S.
Barbara Feeney, M.S.S.
Joan Herrick, M.S.S.
Janet K. Kennedy, M.S.S.
Alice L. Peck, M.S.W.
Mary Lou Silver, M.S.S.
Nancy Staver, M.S.S.

RESEARCH DEPARTMENT

*Chief* Samuel Waldfogel, Ph.D.

*Executive Secretary*

Mildred Dewey, M.S.S.

1915 Pioneer cardiac clinic for children opened at Children's Hospital.

1916 The year of the worst polio epidemic in the nation's history, when more than 25,000 children were crippled in the East alone. Harvard Infantile Paralysis Commission organized with the Central Clinic at the Children's Hospital. Children's Hospital Director of Physical Therapeutics loaned to New York City hospitals to teach pioneer techniques in after-care of polio patients. New York State health authorities sent nurses to study them on the spot.

1918 Children's Hospital played key part in Federal program of instruction in military orthopedics attended by more than 200 surgeons representing 40 states and 70 medical schools.

1920 Infants' Hospital moved to new building within the site of the Children's Hospital.

1946 House of the Good Samaritan, Children's Hospital and Convalescent Home for Children, and Sharon Sanatorium affiliated with Children's and Infants' Hospitals.

1947 Organization of Children's Medical Center announced.

1948 Children's Cancer Research Foundation established as a unit of the Children's Medical Center.

1949 Children's Mission to Children affiliated to Children's Medical Center.

1949 Cerebral Palsy Unit organized.

1950 Mary MacArthur Memorial Respirator Unit opened at Wellesley. in memory of the daughter of Helen Hayes, world famous actress.

1951 Work of the Sharon Sanatorium transferred to the Children's Hospital and the Sharon Cardiovascular Unit organized.

1952 Adolescent Unit established.

1952 Jimmy Fund Building dedicated.

1953 Judge Baker Guidance Center affiliated with the Children's Medical Center and, simultaneously, a separate Psychiatric Department organized at the Children's Hospital.

1953 Ground broken for new 8-story building.